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TWO LINE *Editorials*

A Washington columnist says that television audiences are being fed a line of disguised socialism and communism. Most of the television listeners, however, still seem to have more admiration for Groucho Marx than for Karl.

* * *

One authority on Russian affairs expresses the view that Premier Malenkov is already growing despondent. And we may well look out for colorful developments when a Red gets blue.

* * *

Engravers state that it is now possible to print the entire text of the Bible in a space three-eighths of an inch square. That will give some people another reason for not reading it.

* * *

Physicians announce that it is now possible to take X-ray pictures in colors. Won't it be terrible to discover that you are sick in technicolor?

* * *

Advertising copy writers report difficulty in properly describing a new synthetic fabric that is wrinkle-proof. Can't call it a new wrinkle?

* * *

The Internal Revenue Department is planning to use "comic cartoons" in its tax collection program. Our idea of a man with a highly developed sense of humor is a man who can laugh at a cartoon when he's paying his income tax.

Washington Report

July 16, 1954

THE General Services Administration, which does the buying for the Government's stockpiling program, has reentered the market for lead and zinc. As with previous purchases, the agency wants metal produced from domestic ores subsequent to April 1. Delivery must be completed by September 1. Although GSA did not ask for specific tonnages, it is believed the total accepted would be about in line with the June-July period when the agency acquired an estimated 8,000 tons of lead and 12,000 tons of zinc. It is understood both metals will be bought at the current market price of 14 cents New York for lead and 11 cents East St. Louis for zinc.

It was also disclosed that the Office of Defense Mobilization has authorized purchases of two additional materials — copper and metallurgical manganese — under its "long-term" stockpile program. A GSA spokesman said most of the purchases of copper and manganese will be made from inventories already accumulated by the Government with the $2,100,000,000 "borrowing authority" of the Defense Production Act. Some "very small" amounts of "special purpose" copper and manganese are expected to be bought in the open market.

Special Senate Subcommittee

Meanwhile, a special Senate subcommittee, headed by Sen. George W. Malone (Rep., Nev.), recommended that the Government speed up its metal and mineral stockpiling program and place greater emphasis on Western Hemisphere sources for raw materials. The group's report decried what it said was the Government's policy of buying critical raw materials overseas, and that such a procedure made this nation dangerously dependent on "possible fickle allies or timid neutrals." The subcommittee also favored repudiation of all international controls of production, prices and supplies of critical materials.

That the Administration would push its stockpiling program was evident on June 22 when President Eisenhower asked Congress for a supplemental appropriation of $380,000,000 to acquire strategic and critical materials, including metals. The money would be used by the GSA in the current fiscal year and would remain available until expended.

Quicksilver Buying Program

The Government's stockpiling program for another metal, quicksilver, was spurred when General Services Administration announced a three-year plan to buy 200,000 flasks of domestic and Mexican quicksilver at a ceiling price of $225 a 76-pound flask. The GSA will buy domestic quicksilver through the end of 1957 or until 125,000 flasks have been purchased, whichever comes first. In addition, the agency will buy Mexican metal, duty paid, until the same date or until 75,000 flasks have been obtained. Mexican producers will have to absorb a duty of $19 a flask in selling their output to the U. S.

GSA also revealed that additional purchases of quicksilver may be made from time to time from specific foreign producers, particularly those located in Canada. Edmund Mansure, GSA administrator, emphasized that the Government "does not at present intend to make any market purchase of mercury at prices in excess of the $225 guaranteed price." The metal currently is quoted at $285 to $290 a flask in New York Domestic production of quicksilver is expected to be stimulated by the new Government purchase program.

Metal Import Duties

Pressure is being brought to bear on the President to take action on lead and zinc import duties. Thirty-two Senators from Western mining states drafted a letter urging the President to secure relief for the domestic lead and zinc mining industries under the Reciprocal Trade Agreement Act's escape clause. Sen. Pat McCarran (Dem., Nev.), often referred to as a spokemen for this group, said the Tariff Commission unanimously recommended that the President use the escape clause to protect domestic mining interests. The commission's recommendations, now before the President, are reported to have a July 21 deadline.

The President, meanwhile, signed the bill to suspend import duties on primary and scrap copper for another year to June 30, 1955. The measure provides for reimposition of duties on virgin and scrap metal should the price of refined copper fall below 24 cent a pound for any calendar month.

The House has also passed a bill (H. R. 8155) to permit duty-free importation of scrap iron and certain scrap metals including aluminum, brass, magnesium, nickel and nickel alloy, tin and tinplate. Duty-free importation of zinc scrap would be permitted only if it comes in under terms of a contract made before July 1, 1954.

Retain Gov't Tin Smelter

Congress has completed action on a bill requiring the Government to continue operating the Government-owned tin smelter at Texas City, Texas, through next June. According to the bill, Congressional committees are to study during the coming 12 months the advisability of maintaining the smelter for later years or whether it should be disposed of to private industry. The Administration had originally proposed that the smelter be sold or leased to private industry immediately, but later went along with the legislation to continue its operation for another year.

World Tin Agreement

Speaking of tin, Japan and Turkey have signed the International Tin Agreement worked out at Geneva, Switzerland. Only one consuming country's signature was needed prior to June 30, and now there is one to spare. All of the producing countries except Siam have signed the pact. The next step is for the agreement to be ratified by the member Governments and this is generally regarded as routine.

Aluminum Forging Capacity Rise

ODM has called for a boost of 27 per cent in U. S. aluminum forging capacity by the end of 1955. It set an interim expansion goal of total annual capacity of 504,150,000 pounds by Jan. 1, 1956. The agency will grant U. S. producers rapid tax write-off allowances on new forging facilities which meet requirements of the program. The new facilities

(Continued on page 10)

ADEQUATE STRATEGIC METAL SUPPLY IN EVENT OF FUTURE NATIONAL EMERGENCY ASSURED BY GOV'T

Defense Production Act Commitments, New Long-Term Stockpiling Policy, Fast Tax Write-Offs Chief Factors in Increasing Stocks

By JOHN D. MORGAN, Jr., Materials Division, Office of Defense Mobilization

Part I

TO make a proper evaluation of future metal and mineral supplies available for the United States it is necessary to consider two very different conditions — peace or war. We must distinguish between peacetime and wartime conditions since a variety of laws and controls, as well as additional supplies, will become significant factors in the event of another war. Present conditions are neither peace nor war. General allocations, limitation orders, and price controls have been removed and the Government, except in a few instances, is not engaging in new efforts to stimulate directly the production of metals and minerals. However, many expansion programs are still under way as a result of actions taken after the start of the Korean war in mid-1950.

In the event of a war emergency in the near future, materials shortages in many cases are not expected to be as severe as was the case in World War I, World War II, and the Korean War. Purchasing agents will be glad to hear that increased supplies of materials can be made available from a variety of programs which are briefly described below.

Prior to World War I, there had been no Government stockpiling program. Prior to World War II only relatively few items were included in Government stockpile programming — and the start of that war found most objectives for even these few materials far from complete. Profiting by the experiences of materials shortages in two World Wars the Congress in 1946 passed the Strategic and Critical Materials Stockpiling Act (Public Law 520, 79th Congress, July 23, 1946), which stated that it is the policy to decrease and prevent wherever possible a dangerous and costly dependence of the United States upon foreign nations for supplies of strategic and critical materials in times of national emergency.

Some progress was made in accumulating stockpiles in the years from 1946 to 1950 but the start of the Korean War in mid-1950 found few objectives achieved, the chief obstacle having been a lack of adequate funds for procurement before the start of the war. There was always the possibility that the Korean War might be enlarged. Accordingly, while producing munitions in the period from 1950 to the present, it was also necessary to secure additional supplies of materials to add to the national stockpile.

The official list of materials (see accompanying table) shows that 75 materials are now being actively stockpiled and of the total of 75, 55 are metals and minerals. At the present time, minimum stockpile objec-

List of Materials Being Stockpiled by U. S. Gov't

1. Abrasive Crude Aluminum Oxide
2. Aluminum
3. Antimony
4. Asbestos, Amosite
5. Asbestos, Chrysotile
6. Asbestos, Crocidolite
7. Bauxite, Metal Grade
8. Bauxite, Refractory Grade
9. Beryl
10. Bismuth
11. Bristles, Hog
12. Cadmium
13. Castor Oil
14. Celestite
15. Chromite, Chemical Grade
16. Chromite, Metallurgical Grade
17. Chromite, Refractory Grade
18. Cobalt
19. Coconut Oil
20. Columbite
21. Copper
22. Cordage Fibers, Abaca
23. Cordage Fibers, Sisal
24. Corundum
25. Cotton, Extra Long Staple
26. Diamonds, Industrial
27. Feathers and Down, Waterfowl
28. Fluorspar, Acid Grade
29. Fluorspar, Metallurgical Grade
30. Graphite, Amorphous Lump
31. Graphite, Crucible Grade
32. Graphite, Lubricant and Packing Grade
33. Hyoscine
34. Iodine
35. Jewel Bearings, Instrument Jewel except Vee Jewels
36. Jewel Bearings, Sapphire and Ruby Vee Jewels
37. Jewel Bearings, Watch and Timekeeping Device Jewels
38. Kyanite
39. Lead
40. Magnesium
41. Manganese Ore, Battery Grade
42. Manganese Ore, Chemical Grade
43. Manganese Oer, Metallurgical Grade
44. Mercury
45. Mica, Muscovite Block, Good Stained and Better
46. Mica, Muscovite Block, Stained (Radio Tube Quality)
47. Mica, Muscovite Film
48. Mica, Muscovite Splittings
49. Mica, Phlogopite Splittings
50. Molybdenum
51. Nickel
52. Opium
53. Palm Oil
54. Platinum Group Metals, Iridium
55. Platinum Group Metals, Platinum
56. Pyrethrum
57. Quartz Crystals
58. Quinidine
59. Quinine
60. Rare Earths
61. Rubber, Crude Nacural
62. Sapphire and Ruby
63. Selenium
64. Shellac
65. Silk
66. Sperm Oil
67. Talc, Steatite, Block
68. Tantalite
69. Tin
70. Tungsten
71. Vanadium
72. Vegetable Tannin Extract, Chestnut
73. Vegetable Tannin Extract, Quebracho
74. Vegetable Tannin Extract, Wattle
75. Zinc

Address delivered at 39th annual international convention of National Association of Purchasing Agents, Chicago, Ill., May 26, 1954. The opinions are those of the author and do not necessarily reflect official views.

tives are valued at about $7 billion and materials actually on hand are valued at more than $4 billion; thus the stockpile is about two-thirds complete on an over-all basis. This percentage varies, of course, from material to material. For example, minimum objectives for tin, lead and zinc have been achieved while those for some other materials, such as nickel, are still far from being met. Stockpile objectives for all materials are reviewed from time to time and are revised upward or downward as indicated by changes in requirements and supply estimates. Materials in the stockpile can be released only on order of the President when required for purposes of the common defense or in time of war or during a national emergency with respect to common defense.

In The Event Of War

An emergency in the near future would, in addition to material in the stockpile, find additional supplies of materials resulting from other actions of the Government. In the National Industrial Reserve there are several materials-producing facilities which could be reactivated in the event of war. For example, during the period of the Korean War several magnesium plants in this industrial reserve were opened and put into production to provide additional quantities of magnesium for defense purposes. Some of this material was produced by processes that would normally have become uneconomic, but the material was made available to industry at ceiling prices.

Under the Defense Production Act of 1950, as amended (Public Law 774, 81st Congress, approved September 8, 1950), commitments exceeding $5 billion have already been made to expand supplies of metals and minerals for defense purposes. Among the major programs launched under this authority is aluminum, where United States annual capacity has been doubled from its pre-Korean level of 700,000 tons a year to a present level of about 1,500,000 tons a year. In the case of copper, over a billion dollars in long-term market guarantees have resulted in the expansion of several major domestic copper properties such as the San Manuel Deposit in Arizona and the White Pine Mine in Michigan. These and other properties are expected to increase U. S. domestic mine production of copper by a couple of hundred thousand tons a year when in full production.

Over a half billion dollars have been obligated to increase the production of nickel, while hundreds of millions have also been obligated for each of the following: chrome, manganese, molybdenum, and tungsten. Lesser sums are involved in expansion of many other materials including fluorspar, mica, asbestos, graphite, lead, and zinc.

Titanium Output Up

Titanium production has already been increased from just a few tons prior to the Korean War to an annual production of about 5,000 tons a year at the present time. This, however, is small compared to the quantities expected in future years since the present expansion program is aimed at producing about 32,000 tons a year of titanium sponge by 1956. It is expected that this target will be raised even higher when more economical processes can provide quantity production. Although titanium is heavier than aluminum it is also much stronger and thus offers many advantages in view of its strength-weight ratio. When coupled with the facts that titanium is highly resistant to corrosion and can stand temperatures considerably higher than aluminum it is readily apparent why aircraft manufacturers want titanium for use on many parts of the new airplanes that are expected to travel at supersonic speeds. The use of this relatively high-cost metal will result in very favorable performance characteristics as well as subsequent weight and fuel savings that should far outweigh the original high-cost of the metal.

Accelerated Tax Amortization

Under the Revenue Act of 1950 (Public Law 814, 81st Congress, approved September 23, 1950), it has been possible to grant accelerated tax amortization to aid in the expansion of operations of numerous producers of metals and minerals. Using accelerated tax amortization nearly $2 billion in expansion of metal and mineral production has been undertaken since the start of the Korean War. Steel is a major industry where the expansion has taken place almost entirely by private financing with the assistance afforded by accelerated tax amortization. Current steel capacity is about 124 million tons a year compared to World War II capacity of about 85 million tons a year. Thus, almost 40 million more tons of steel are available for either current industrial use or defense production than was the case in World War II.

Under Section 450 of the Revenue Act, it has been possible to exempt from the excess profits tax domestic production of certain strategic and critical metals and minerals which previously had not been produced in appreciable quantity within the United States. This assistance has resulted in a major increase of domestic production of the rare earth minerals (which include cerium, neodymium, lanthanum, and several other extremely rare elements) where, only a few years ago, the U. S. was almost wohlly dependent on foreign sources such as Brazil and India.

Search For Minerals

Under the Defense Production Act, the search for new domestic mineral deposits has been encouraged by a program designed primarily to assist small mining companies by advancing a portion of the costs involved in exploring for domestic minerals. Under this program, administered by the Defense Minerals Exploration Administration in the Department of the Interior, approximately $20 million have been spent and 640 projects in over 30 states have been undertaken. Several of these projects are expected to result in increased future domestic production.

In addition to expanding supplies of materials within the United States, efforts have also been made by the Government and private industry to expand supplies in strategically accessible foreign countries. In 1948 the United States depended on the USSR for about one-third of our supplies of chrome and manganese — both essential alloying elements in steel production. Shortly thereafter, as a part of the "cold war" strategy, supplies of these two materials were completely cut off by the USSR. Private industry with Government help, largely in the form of underwriting contracts, gave greater attention to other sources of manganese, notably in India, Brazil, and Africa and to other sources of chrome, notably in Turkey, Africa, Cuba, and the Philippines. Today the United States does not need to rely on any shipments of chrome and manganese from the USSR and the stocks on hand in the stockpile are much larger than at the start of the Korean War. Moreover, the domestic production of both manganese and chrome has been enocuraged by Government-sponsored procurement programs which extend over a number of years.

Revise Stockpile Program

On March 26, 1954, President Eisenhower announced that he had authorized the Office of Defense Mobilization to revise the stockpile program by establishing new "long-term" minpossible, the dependence of the United States upon foreign sources in time of emergency. For the purpose of eral stockpile objectives. These objectives are intended to eliminate, where

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COPPER AND ALUMINUM MAKING INROADS ON USE OF LEAD IN U. K. BUILDING, CABLE SHEATHING FIELDS

New Trend for Lead in Casting and Specially Extruded Shapes Has Developed With Rapid Growth of Atomic Energy Facilities

By S. CAHN, Managing Director, Goodlass Wall and Lead Industries, Ltd.

IN the chemical trades, lead is supreme on account of its unequalled resistance to corrosion by a wide variety of chemicals. In the form of pipes it is widely used as heating coils and for conveyance of corrosive liquids, while in the form of sheets it is employed in the construction of plants such as acid chambers and towers and tank linings. Lead of the highest purity and a variety of its alloys, including copper-bearing lead, copper-tellurium lead and silver-copper-lead, as well as antimonial lead, are available to provide against corrosion, alternations in temperature, and vibration effects, in the wide range of conditions liable to be met with in chemical manufacturing industries.

Building Industry

The building industry is the one where the main competition exists between lead and copper, used in the forms of pipes for water services and sheets for roofing purposes.

It may be said that the growth of copper tubing for conveying water and gas in buildings began in about 1917. Before this period, lead was almost exclusively used for these purposes. In recent years, however, particularly during the period when lead was at its highest price, the use of copper has made active progress for general water services and roof coverings.

These changes have come about partly through improvements in manufacturing technique for copper tubes, such as the production of malleable tube in very long lengths to reduce the number of joints required, as well as by the introduction of standardized joint fittings. In the main, however, the price element has been of greatest importance.

Post-War Preference

It is probably true to say that the respective uses above ground of lead and copper pipe water services in buildings is determined, apart from price, by the general ease of installation on the one hand, where lead has the advantage, and the appearance of the finished job, in which copper is preferred. In the post-war building program of new dwelling houses, the price of copper has usually been favorable compared with lead, and copper water service pipes are generally installed. The main field for lead is in the maintenance and repair of existing lead water services, which must still form the great majority of installations in Great Britain. Also it may be anticipated that the recent decision of the British Government to modernize older dwellings as part of the post-war program, will result in an extension of this field for a good many years to come. Lead also usually is installed for waste pipes and other non-pressure pipes where the walls are thin.

An encouraging factor in the use of lead may be looked for in the adoption of lead alloys containing small controlled amounts of other metals, giving much improved creep-resistance properties and enabling pipes of lighter weights to be used. The savings in cost to be effected may well provide sufficient advantage in favor of lead as against the use of copper.

Coming to underground water services, while considerable quantities of copper tubes have been used for this purpose in the U. S. A., lead pipe is still the most generally accepted in the British Isles, because of easy installation, together with its excellent resistance to corrosion by all types of soils. When copper is used, the precaution of wrapping and protection has to be taken. Lead always has the strong advantage of easy jointing, either by means of the well-known plumbers wiped joint, or the more modern form of soldered spigot joint which has been devised to save solder and make for more rapid installation. The problem of jointing copper requires a wide range of specialized fittings, which are never cheap, and repairs are often difficult and expensive.

Position Of Aluminum

The second point on which my observations are asked for is the posi-

Excerpts from paper read at 26th annual meeting of Lead Industries Association, Chicago, Ill., April 22-23, 1954.

tion of aluminum for cable sheathing.

The use of aluminum for cable sheathing was first adopted in Britain about 1948, and has now reached appreciable and growing proportions, was started at that time by a single cable manufacturing company, and is now being tried by nearly all the major cable manufacturers in this country.

The reasons for adopting aluminum as the most suitable alternative to lead for cable purposes arose mainly from fears of lead shortages at the end of the war. It was doubtless that this cause provided the most important incentive for the development of aluminum for cable sheathing.

Having said this, and bearing in mind the very high price of lead that obtained in 1950-1951, which is the period when the experimental work on aluminum got well under way, it is probably true to say that with lead at a lower price it would continue to be much more generally used in the cable industry because it would continue to be much more generally used in the cable industry because it lends itself to so much easier fabrication and manufacture than aluminum can possibly do.

Characteristics Of Aluminum

At the same time such superior physical characteristics of aluminum as increased mechanical strength, resistance to creep and fatigue failure render it attractive for use on gas pressure cables, since external reinforcement is unnecessary.

The lightness in weight of aluminum would be another advantage. On the other hand, its resistance to corrosion by soils is far inferior to that of lead, and often takes the form of severe pitting within a very short time.

Aluminum sheathed cables are not as flexible as lead sheathed cables and consequently they are more difficult to install in confined spaces, but on the other hand this disadvantage is offset by their better self-supporting properties. This reduced flexibility is not of importance where cables are required to be laid direct in the ground, but for duct systems as used in America, this disadvantage becomes more marked.

It may be worth mentioning that one of the greatest differences between the present stages of commercial development in the two countries is that while American telegraph companies are turning more and more to aluminum sheaths, and their power cable authorities are reluctant to make changes which involve the redesign of their duct system, in Britain the greatest development is in power cables, which are seldom laid in ducts.

The electrical conductivity of aluminum is about eight times that of lead and although this has little significance for multicore cables, the losses on bonded single core aluminum sheathed cables are higher than for similar lead sheathed cables.

Free From Aging Effects

Aluminum as a sheathing material is metallurgically stable and is free from any undesirable ageing effects at temperatures up to well above cable operating temperatures.

The method at present used for the manufacture of aluminum sheathing is called the "dieing-down" process, which is a sinking down of oversize tube. One manufacturer uses a pre-extruded aluminum tube into which the cable core is threaded, a seamless, accurately-fitting sheath being then produced by cold sinking. Between 1948 and the present time it has been reported that over 3,000 miles of aluminum sheathed cables were produced by this one manufacturer.

The so-called seamless extruded aluminum tubing is extruded by the porthole die method and "seams" or extrusion welds may be present. Under some conditions, e. g. corrosion, failure can occur at seam positions. Pinholes may develop in this position under prolonged pressure.

Weaknesses aggravated by "grain-growth" can occur at the stop-mark, but for cable sheathing this portion of the pre-extruded tube is always discarded.

Another method of manufacture is to produce a tube from aluminum strip, close the butt joint by a longitudinal weld and then reduce the oversized sheath by rolling down or corrugation.

It is claimed that one of the greatest difficulties in development in the use of aluminum sheathing for cables, namely the making of soldered or sweated joints, has been overcome and satisfactory wiper joints are now in use.

In the early stages the use of super purity aluminum was essential for the production of cable sheathing by direct extrusion, but following developments that have taken place since, purities of the order of 99.5 per cent have been used.

To sum up the situation as far as it has gone, the case for the increasing use of aluminum is that its high endurance limit and greater creep resistance are of technical value in cable sheathings, it is readily available, and while there is at present no wholesale replacement, its economic and other advantages are bound to result in greater developments, with the rapidly increasing world production of aluminum already in sight. The total lead consumption in the cable industry is about 100,000 tons per annum which is roughly equivalent to 20,000 tons of aluminum — about five times the total average amount of extruded aluminum tube manufactured in Great Britain.

Having dealt with the two points given to me, I want to offer my apologies for the rather gloomy picture I have given on our commodity, lead, which is — in the two lines I had to deal with — unquestionably on the defense.

More Cheerful Reports

I am sure you will hear more cheerful reports in respect of lead consumption in such products as tetra ethyl and batteries and a new trend for lead, in the form of castings and specially extruded shapes, has come about with the rapid growth of atomic energy establishments. In this application, the properties of its high density and consequent ability to act as a barrier to radiations, and characteristic ease of casting and extruding into complicated shapes, when taken together are unique among metals that are commercially available at a reasonable price.

Washington Report

(Continued from page 5)

would have no relation to the "third round" program for expansion of aluminum ingot production in the U. S. That program has been all but discontinued because of the build-up of aluminum in the nation's stockpile since last summer.

Sign Titanium Contract

In a move to increase production of another metal needed for defense, GSA has signed a contract with Dow Chemical Company for new titanium facilities. The agreement will boost the nation's output capacity for titanium sponge by 1,800 tons a year at Midland, Michigan. Under the agreement, GSA may purchase a maximum of 2,000,000 pounds of titanium produced before July, 1956, if the company does not find other markets or GSA exercises its option to buy. The price for the first 6,000 pounds bought in any month will be at the market. For the balance, the price will be $5 a pound or the lowest figure at which the company offers metal to any other customer. The contract with Dow brings total planned titanium capacity in the U. S. to 15,000 tons annually.

Assure Adequate Supply of Strategic Metals

(Continued from Page 8)

calculating long-term mineral stockpile objectives, no supplies are assumed to be available to the United States in wartime except in the case of that limited group of countries to which wartime access can be had with the same degree of reliance as afforded by sources within our country. In addition, the President specified that, in view of the fact that the Soviets have the capability of attack on the United States, some supplies from domestic sources may not be available in the event of an emergency, and stockpiling should accordingly be undertaken to provide insurance for the possible destruction of key facilities.

The President stated that wherever possible strategic and critical metals and minerals in the stockpile should be upgraded to the point at which they will be more readily usable in the economy in the event of emergency. About four tons of bauxite (the ore of aluminum) are required to make one ton of aluminum metal. Thus, for example, stockpiling aluminum metal will also serve to stockpile transportation, electrical power, manpower, and facilities, all of which are expected to be short in the event of a future war. Many of the materials in the stockpile, such as copper, lead, zinc, and tin are already in metal form, but the specifications for each material will be reviewed and, where possible, upgrading will be undertaken.

In acquiring metals and minerals for the increment between present minimum stockpile objectives and the new long-term objectives the Government intends to acquire materials normally only at advantageous prices when purchases will also serve to maintain essential elements of the mobilization base. In addition, materials will be acquired in exchange for surplus agricultural commodities or by transferring to the stockpile metal and mineral surpluses generaated under other Government programs. In making purchases the normal channels of trade will be fully utilized to avoid disruption of the normal producer-consumer relationships in the U. S. A. and in friendly foreign countries.

As a result of all the programs described, metals and minerals, with few exceptions, are not expected to be the critical bottleneck in the event of a future war.

To Be Continued)

U.K. COPPER MARKET CONTINUES TO SHOW GOOD TONE; LONDON METAL EXCHANGE PONDERS CONTRACT CHANGES

Tin Prices Expected to Remain Fairly Stable for Rest of This Year; Lead Outlook Linked to U. S. Developments; Zinc Stays Fairly Steady

July 7, 1954

By L. H. TARRING
London, England

THE copper market has continued to display quite a good tone during the past month and on balance prices are somewhat firmer; the backwardation has shown a tendency to widen a little, although fortunately it has not returned to the unwieldy proportions that characterised it earlier in the year. Considering that we are now approaching the holiday season, when demand sometimes shows a tendency to slow down, the volume of consumer buying is keeping up remarkably well, although there is still a tendency on the part of buyers of semi-finished and finished products to proceed very cautiously and buy on a hand-to-mouth basis. This naturally makes the buying program of the fabricators more difficult. There have been some expectations that appreciable quantities of Chilean copper would be arriving here which might have led to additional selling on the Metal Exchange, but so far there has been little evidence of this. If it should develop it may have the result of easing the prompt price, for a time at any rate.

A great deal of attention continues to be devoted to the question of the London Metal Exchange contract for copper. It is common knowledge that for some time the Committee of the Exchange has been examining the possibility of altering the contract or introducing an additional contract for c. i. f. electro on the lines of the one that existed before the war, in an attempt to achieve a price which would be representative of the figure which consumers actually have to pay for the specifiable forms of copper that they actually use. On June 24, however, the Committee of the London Metal Exchange announced that while it agrees that such a step would be desirable it had found many practical difficulties at the present time which made it impossible. The question is to be kept under review, however, and in the meantime the committee is considering possible amendments to the existing standard contract.

The Exchange has been under some attack from copper consumers who claim that its prices were not sufficiently representative. Mr. H. E. Jackson in his presidential address at the annual meeting of the British Non-Ferrous Metals Federation in Birmingham on July 1, devoted a good deal of attention to a factual review of the position. He remarked interalia "There has been a striking unanimity both in the desire of European countries to see the dealings on the London Metal Exchange re-establish it as the recognized medium for setting a proper value on copper in Europe and also in the misgivings about experience in the early stages of its re-opening. We (the Federation) criticized the Standard Copper Contract on the grounds tha it covered too many qualities, that the differentials between the various qualities were too rigid and that the

U. K. COPPER STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. stocks (excluding Government holdings) at the end of April totalled 60,118 tons, a sharp gain over the end March figure of 47,258 tons. Of the April figure 45,501 tons (38,041 tons March) were refined and 14,617 tons (9,217 tons) blister. Consumers stocks at the end of April amounted to 22,516 tons, in L. M. E. warehouses 863 tons, and other stocks 22,122 tons refined, and 14,617 tons blister. Production during the month of primary refined amounted to 11,865 tons and of secondary refined to 6,065 tons (9,755 tons and 6,680 tons respectively in March); output of secondary blister was 927 tons (1,053 tons)

Consumption was lower at 42,480 tons compared with 48,607 tons the previous month. The following figures show U. K. consumption by main trades, in long tons:

	April 1954	Jan. 1953	April 1954
UNALLOYED COPPER PRODUCTS			
Wire	13,271	52,977	54,861
Rods, Bars and Sections	1,053	4,241	4,552
Sheet, Strip and Plate	4,274	13,608	18,971
Tubes	3,730	13,338	14,218
Catings & Misc.	500	2,000	2,000
ALLOYED COPPER PRODUCTS			
Wire	960	2,892	3,935
Rods, Bars. & Sections	6,150,	18,638	26,029
Sheet, Strip and Plate	6,419	25,147	26,754
Tubes	988	4,334	4,078
Castings & Misc.	4,025	12,846	16,949
Copper Sulphate	1,110	4,506	4,309
Total All Products	42,480	154,527	176,656
of which:			
Consumption of Refined Copper (a) Virgin	30,196	(82,895)	
(b) Secondary	. .	(28,163)	134,873
Consumption of Copper & Alloy Scrap (Copper content)	12,284	43,469	41,783

points of delivery specified in the contract were ill-adapted to the needs of Continental buyers. We asked for changes which would result in a London Metal Exchange quotation which could really form a basis of supply contracts between buyers and sellers generally, and we suggested that one method of achieving this might be for the Exchange to adopt an additional form of contract on the lines of the c. i. f. electrolytic wirebar contract which existed in prewar days alongside the contract for standard copper. The London Metal Exchange made clear to us after their announcement on June 24 that they had genuinely sought to provide means for establishing a quotation for wirebars which would be acceptable to buyers and sellers internationally without premium and that it was only after a most exhaustive condsideration of the practical problems that they regretfully announced their decision. Difficulties were found to arise from the import and export and currency controls which still unhappily persist in a number of producing and consuming countries. These practical difficulties in the view of the Metal Exchange ruled out the immediate provision of a contract for buyers open to take delivery at Continental ports. The Metal Exchange representatives said it was still their desire to provide by their dealings a quotation which would be universally accepted and they would welcome the help of the Federation in urging in the right quarters in European countries the need to remove the various licensing and currency restrictions which at present cramp the international flow of business. To my mind it is greatly to be regretted that a time when the Exchange quotation certainly cannot be criticised for being too low,

some producers should still wish to charge a premium".

It seems unlikely that this question will be forgotten, even though for the moment it seems improbable that any definite steps will be taken to alter the existing situation very materially. The London Metal Exchange certainly does not lack its critics but, on the other hand, there is quite a widespread desire (not only in this country) for a representative international price of copper and so far no satisfactory alternative to the London Metal Exchange seems to have come into the picture. Wth the copper supply situation none too easy, it is satisfactory to know that the production difficulties at the Wankie colliery in Rhodesia have now been overcome so that coal supplies to the Northern Rhodesia copper producers should be on a better scale than they have been lately.

U. K. TIN STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports U. K. stocks of tin at the end of April as 4,065 tons (2,598 tons end March), of which consumers held 1,444 tons (1,378 tons). Output during March was 1,452 tons, compared with 1,960 tons in February. The April production figure is not yet available. Consumption was lower at 1,702 tons compared with 1,987 tons in March. The following figures show U. K. consumption during April, in long tons:

	April 1954	Jan. 1954	April 1953
Tinplate	774	3,390	3,290
Tinning	119	497	431
Solder	197	728	478
Alloys	451	1,828	1,837
Wrought Tin	79	255	181
Chemicals	68	278	202
Other Uses	14	49	31
Total All Trades	1,702	7,025	6,450

The outstanding event in connection with tin during the past month has been, of course, the signing of the International Tin Agreement by a sufficient number of conusuming and producing countries to make the Agreement operative, provided it is duly ratified by the countries which have intimated their agreement to the draft proposals. The matter remained in some doubt up to the last minute, a number of signatures being appended only at the very end of June. There seems no reason to suppose that ratification will be withheld by any of the countries concerned, and Germany which is a notable abstainer among the tin consuming countries, may well wish to participate at a later stage. The effect of this support for the international agreement, coming particularly at a time when developments in Indo China were of a very unsatisfactory nature for the Western Allies, had the effect of materially stiffening tin prices. It seems open to doubt whether the various provisions of the Agreement designed to strengthen the market position of the metal will need to be implemented in the immediate future, as it would seem that the threatened surplus on the world market for this year has been definitely taken care of by American Government purchases. This is perhaps a very good thing as it should enable the tin agreement to get into operation without undue pressure. At the present time although there is little or no surplus tin about, there seems to be an adequate supply of the metal to meet consumers actual needs, and nowhere does one hear of users being short of supplies. Political considerations apart, it is felt here that prices will reasonably be held somewhere in the present region over the remainder of this year, as any early further upward movement might possibly prejudice the final implementation of the control agreement, without which the future supply position would look very top heavy. It is of course, impossible to ignore political considerations entirely at the present time, as the Eastern situation is pregnant with possibilities, and further developments in Indo-China may well have an important bearing on sentiment with regard to tin. As far as consumption is concerned this seems to be maintained pretty steadily and to be showing no marked trend in either direction.

U. K. LEAD STATISTICS

According to the British Bureau of Non-Ferrous Metal Statistics, U. K. stocks of pig lead at the end of April totalled 30,005 tons (28,312 tons end March) and comprised 24,230 tons imported virgin (23,028 tons) and 5,775 tons English refined (5,248 tons). Stocks held by consumers at the end of April were 15,453 tons imported virgin (12,832 tons end March) and 5,007 tons English refined (3,731 tons). London Metal Exchange warehouse stocks included 1,451 tons imported virgin (2,586 tons end March), while other stocks were 7,326 tons (7,610 tons), imported virgin, and 768 tons (1,553 tons) English refined. Production of English refined during the month rose to 6,125 tons compared with 5,706 tons in March.

Consumption during April was lower at 25,820 tons compared with 29,442 tons end March. The following figures show U. K. consumption by main trades during April, in long tons:

	April 1954	Jan. 1953	April 1954
Cable Making	6,039	36,809	26,759
Battery (excluding Oxides)	2,524	9,211	10,339
Oxides and Compounds			
Battery	1,954	7,817	9,389
Other Uses	3,295	9,646	12,872
White Lead	850	3,142	3,782
Sheet and Pipe	6,408	21,410	24,779
Shot	357	1,355	1,670
Foil & Collapsible Tubes	291	981	1,335
Soider	1,056	3,181	4,237
All other alloys	1,205	3,469	4,802
Misc. Uses	1,787	4,818	6,921
Total Consumption	25,820	101,839	106,858
of which:			
Imported Virgin	14,137	49,930	61,422
English Refined	5,180	22,763	20,214
Scrap, including remelted	6,503	29,146	25,249

On the whole, the tone of the lead market in Europe during the past month can be said to have been pretty satisfactory with prices moving between about £96 and £99 a ton. The stimulating effect of the American stockpiling arrangements for lead has worn off to some extent and some disappointment is expressed here at the rather dull state of the U. S. domestic market. With the normal quiet summer months at hand, it is perhaps open to doubt whether prices will be fully maintained in the immediate future unless things in the U. S. A. take a more bullish turn. However, there certainly seems to be no surplus of lead in Europe at the present time and in the U. K. prompt or early delivery metal continues to realize higher prices than forward, owing to the fact that consumers are still inclined to but very cautiously.

U. K. ZINC STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports U. K. stocks of slab zinc at the end of April as 38,953 tons compared with 40,710 tons at the end of March. Of the April figure 20,306 tons were held by consumers (19,449 tons), 1,669 tons in London Metal Exchange warehouses (1,555 tons). The estimated zinc content of zinc concentrates held totalled 32,517 tons at the end of the month 26,076 tons end March). Production during the month amounted to 6,079 tons compared with 8,142 tons in March.

Consumption during April was lower at 26,084 tons compared with 29,001 tons in March. The following figures show U. K. consumption by main trades during April, in long tons:

	April 1954	Jan. 1953	April 1954
Brass	8,395	27,892	35,063
Galvanizing	8,656	28,265	35,894
of which:			
General	2,763	10,585	11,040
Sheet	2,870	7,980	11,746
Wire	1,774	4,898	6,900
Tube	1,249	4,802	5,408
Rolled Zinc	1,612	6,881	7,137
Zinc Oxide	2,996	7,227	10,706
Zinc Alloy Diecasting	2,765	7,088	11,279
Zinc Dust	653	2,170	2,749
Misc Uses	1,007	3,836	3,958
Total All Trades	26,084	83,899	105,986
of which:			
Primary metal	19,082	58,531	77,285
Secondary	7,002	25,368	28,701

With U. S. Government stockpile purchases of zinc having rather less effect on the American domestic market than had been anticipated, the zinc market over here has been fairly steady in recent weeks. There has been little discernible change in the fundamental situation in Europe and consumption on this side of the Atlantic seems to be maintained on quite a satisfactory scale. Against this, however, there does not appear to be any shortage of supplies and this is reflected in the widening of the contango in London Metal Exchange prices. The level of consumer demand in America has caused some disappointment and the market here cannot overlook the fact that U. S. producers are holding very large stocks. Even though there is little likelihood of these being released on the open market they are not conducive to an optimistic frame of mind when consumer demand in the U. S. A. is inclined to be a little apathetic.

GOVERNMENT RESUMES PURCHASES OF LEAD AND ZINC FOR STOCKPILING: ACTION HELPS TO FIRM MARKETS

Copper Demand Continues Strong and Chile Advances Asking Price; Tin Moves in Narrow Range as World Agreement Nears Ratification

July 16, 1954

A HIGHLIGHT of the domestic metal picture last month was the re-entry of the Government into the lead and zinc markets as a buyer for the stockpile. Although the action failed to create any buying enthusiasm on the part of consumers, it did have a firming effect on the market. Copper demand continued strong, with prices steady despite a mark-up in Chile's asking price abroad. Among the other metals, tin quotations moved within a narrow range with the international agreement nearing ratification. Spot quicksilver climbed still further but it was questionable whether the quotation could be held at the latest level.

While the domestic price of copper remained firm at 30 cents a pound, delivered, the Central Bank of Chile, which handles the copper sales for the Chilean Government, has made sales for September shipment on the Continent at 29.95 cents f. a. s. Antofagasta, equivalent to 30.25 cents. However there is little likelihood of United States consumers paying more than 30 cents for Chilean copper since they will continue to get the metal at the same price at which domestic metal is sold.

When selling on the Continent, however, the Chilean Bank is cognizant of the fact that the London price is very close to 30 cents and that the delivered price to consumers on the Continent is higher. Hence the Bank has been asking the equivalent of 30.25 cents, especially when payment is not being made in dollars. When barter deals are involved, it is difficult to determine the price since the transaction really involves an exchange of commodities.

Chile Boosts Copper Output

As a result of improved demand, production at the American-owned copper mines in Chile is being increased substantially. Chilean copper output in July is scheduled at about 30,000 tons which compares with monthly output of around 20,000 tons following cutbacks in February and March of this year. Among the various producers, Kennecott Copper Corporation has returned Braden to a 6-day week from five, which will boost output to 10,000 tons a month from 7,800 tons. Anaconda Copper Mining Company's Chuquicamata and Potrerillos mines went back to a six-day week in June with Anaconda's output that month estimated at 20,000 tons against 14,000 tons in May.

In this country too, output is expected to increase during the second half as several large new mines begin operations. Phelps Dodge Corporation will start up its Lavender Pit mine within a few weeks and Miami Copper Company will open its Copper Cities facility in August. Toward the end of the year, Copper Range Company's White Pine orebody will swing into production. It should be noted, however, that it take 90 to 120 days from the time ore is mined until refined copper reaches the market and supplies are likely to remain tight over the next few months at least.

Copper Strikes Threatened

The tight supply situation could develop into a serious shortage if the current strike threats materialize in this country and Chile. The International Union of Mine, Mill and Smelter Workers has scheduled a strike vote on July 21 and 22 at all local unions at Anaconda, Kennecott, Phelps Dodge, the Coeur d'Alenes and Miami (Arizona) area. The union claimed that only Kennecott has made an offer thus far and this was rejected as "completely inadequate." However negotiations are continuing and it is hoped that a peaceful settlement will be reached following the example in the steel industry.

In Chile, scheduled strikes have been postponed repeatedly. With the Chilean Government getting an important share of its income from copper sales, it is expected that Government officials in that country will do their utmost to keep the mines in operation so as not to interefere with incoming revenue.

Reflecting the need for foreign metal, there was no Congressional opposition to suspending the 2.00 cents a pound import duty for another year to June 30, 1955. As did previous legislation, the current law provides for restoration of the import tax if the market price should fall below 24 cents a pound for any calendar month.

Await Lead, Zinc Duty Ruling

Unlike the situation in copper, the question of lead and zinc duties still is unanswered. Separate bi-partisan groups of Senators and Representatives have conferred with President Eisenhower and urged him to accept the Tariff Commission's recommendations for higher duties to aid domestic producers. The President has until July 21 to modify, accept or reject the commission's proposals. At this writing there is no indication of what the President will finally decide to do although he has promised "to bear carefully in mind" the industry's plea for greater protection.

Whether the Government's purchases of lead and zinc for the stockpile will have any bearing on President Eisenhower's decision on the import duties of these metals is still a matter of conjecture. In some quarters the opinion was expressed that if the President raises the duties, the increase will probably not be anywhere near as large as that requested by the industry.

Gov't. Buying For Stockpile

Government purchasing for the stockpile has not yet been an important factor in the lead and zinc markets. When the General Services Administration made its stockpile purchase in June, it took two bites at zinc and at first refused to buy any lead at 14.25 cents or at 14 cents. The Office of Defense Mobilization had fixed a ceiling of 13 cents for zinc and under 14 cents for lead. Subsequently, the ODM modified its position and instructed the GSA to buy the metals "'at the market price." The agency then acquired somewhere in the neighborhood of 8,000 tons of lead at 14 cents and 10,000 to 12,000 tons of zinc at 11 cents. How much lead and zinc GSA will buy this time, only the agency knows.

In discussing the current status of the lead market, some factors termed it "mid-summer dullness." Many consuming plants have closed for the first two weeks of July for vacations. When operations are resumed, it is

presumed that buyers will reenter the market for lead for August shipment. In the meantime, the demand is light. The business currently being placed is at the established prices of 14 cents at New York or 13.80 cents at St. Louis and also at the July average. Foreign buying of lead has also tapered off to some extent from the substantial tonnages that consumers abroad took in June. The export price is quoted at 12.25 to 12.50, f. a. s. Gulf ports.

The demand for zinc continues spotty with consumers generally taking their time in covering their forward needs. On the other hand, producers do not feel any pressure to sell. Sales are being made at the spot quotation of 11 cents E. St. Louis for the Prime Western grade and also at the July average. The call for Special High Grade metal is on the light side and this is attributed to the cutback in auto production. Favorable factors in the market outlook include settlement of the steel dispute without a strike. The industry also was gratified by the generally favorable statistics for the month of June.

Zinc Shipments Increase

Domestic consumers took more zinc in June than they did in any month since May of last year and for the first time since November, 1952, shipments to domestic users exceeded the output of all grades of zinc. Also, producers' stocks were reduced by close to 9,000 tons.

Shipments of all grades of zinc in June amounted to 80,239 tons as compared with 64,566 tons in May, a gain of 15,673 tons, according to figures compiled by the American Zinc Institute. Of the total shipped in June, 72,257 tons went to domestic consumers a gain of 10,398 tons over the May shipments.

Domestic production of all grades of zinc in June came to 71,466 tons as compared with 73,654 tons in May, a decrease of 2,188 tons. However on a daily basis, the June output averaged 2,382 tons as compared with 2,376 tons in May.

Since shipments exceeded production by 8,773 tons, producers' stocks at the end of June were reduced by that amount, bringing them down to 201,055 tons.

World Tin Agreement

Quick ratification of the International Tin Agreement by member Governments is expected now that sufficient consuming countries have signed the pact. The world pact, reached at Geneva, is designed to stabilize the world supply and demand at a reasonable price. In tin circles, the opinion was expressed that as soon as the agreement was ratified by the signatory Governments, the price of the metal was likely to approach the $1.00 a pound level but that it would probably not cross it. Spot tin currently is quoted at about 96.75 cents a pound.

Spot Quicksilver Tight

Spot quicksilver has been traded in recently at $290 per flask after rising steadily from the range of $270 to $275 last quoted in this column. However only small lots have been traded in at the latest level and consumers are reported hesitant about making future commitments. The big question in trade circles is whether the present price can hold or whether quicksilver will become more readily available, which may weaken the price. Domestic production, meanwhile, is expected to be spurred by the Government's decision to acquire 200,000 flasks at a ceiling price of $225. For details on the program see Washington report on Page 5.

Daily Metal Quotations in June, 1954

The following quotations are taken from the Daily Metal Reporter

(In Cents Per Pound)

June	Copper					Tin — Straits New York		Lead		Zinc					Aluminum	Antimony	Silver
	Producers' Price Del. Conn.	Custom Smelters' or Outside Price	Electro f. o. b. Refinery	Lake Del.	Average Electrolytic Export Price f. a. s. N. Y.	Spot	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	Virgin 99%	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
1	30.00	30.00	29.70	30.00	30.00	93.75	93.75	14.00	13.80	10.50	11.00	10.75	11.85	12.00	21.50	28.50	85.25
2	30.00	30.00	29.70	30.00	30.00	94.00	94.00	14.25	14.05	10.50	11.00	10.75	11.85	12.00	21.50	28.50	85.25
3	30.00	30.00	29.70	30.00	30.00	93.75	93.75	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
4	30.00	30.00	29.70	30.00	30.00	93.75	93.75	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
5	30.00	30.00	29.70	30.00	30.00	....	....	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	....
7	30.00	30.00	29.70	30.00	30.00	93.50	93.50	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
8	30.00	30.00	29.70	30.00	30.00	93.75	93.75	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
9	30.00	30.00	29.70	30.00	30.00	93.625	93.625	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
10	30.00	30.00	29.70	30.00	30.00	94.25	94.25	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
11	30.00	30.00	29.70	30.00	30.00	93.75	93.75	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
12	30.00	30.00	29.70	30.00	30.00	....	....	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	....
14	30.00	30.00	29.70	30.00	30.00	93.50	93.50	14.25	14.05	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
15	30.00	30.00	29.70	30.00	30.00	93.375	93.375	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
16	30.00	30.00	29.70	30.00	30.00	93.625	93.625	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
17	30.00	30.00	29.70	30.00	30.00	93.625	93.625	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
18	30.00	30.00	29.70	30.00	30.00	93.375	93.375	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
19	30.00	30.00	29.70	30.00	30.00	....	....	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	....
21	30.00	30.00	29.70	30.00	30.00	93.25	93.25	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
22	30.00	30.00	29.70	30.00	30.00	94.125	94.125	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
23	30.00	30.00	29.70	30.00	30.00	94.625	94.625	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
24	30.00	30.00	29.70	30.00	30.00	94.75	94.75	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
25	30.00	30.00	29.70	30.00	30.00	95.00	95.00	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
26	30.00	30.00	29.70	30.00	30.00	....	....	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	....
28	30.00	30.00	29.70	30.00	30.00	95.875	95.875	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
29	30.00	30.00	29.70	30.00	30.00	96.50	96.50	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
30	30.00	30.00	29.70	30.00	30.00	96.50	96.50	14.00	13.80	11.00	11.50	11.25	12.35	12.50	21.50	28.50	85.25
AV.	**30.00**	**30.00**	**29.70**	**30.00**	**30.00**	**94.24**	**94.24**	**14.11**	**13.91**	**10.96**	**11.46**	**11.21**	**12.31**	**12.46**	**21.50**	**28.50**	**85.25**
HI.	**30.00**	**30.00**	**29.70**	**30.00**	**30.00**	**96.50**	**96.50**	**14.25**	**14.05**	**11.00**	**11.50**	**11.25**	**12.35**	**12.50**	**21.50**	**28.50**	**85.25**
LO.	**30.00**	**30.00**	**29.70**	**30.00**	**30.00**	**93.25**	**93.25**	**14.00**	**13.80**	**10.50**	**11.00**	**10.75**	**11.85**	**12.00**	**21.50**	**28.50**	**85.25**

Copper Brands

Deliverable Against Commodity Exchange, Inc.

Brand or Marks	Producer	Grade
B. E. R.	American Smelting & Refining Co. (Baltimore, Md.)	Electrolytic
P. A.	American Smelting & Refining Co. (Maurer, N. J.)	Electrolytic
T	American Smelting & Refining Co. (Tacoma, Wash.)	Electrolytic
B. & M.	Anaconda Copper Mining Co.	Electrolytic
AE	Andes Copper Mining Co.	Electrolytic
BOLIDEN	Bolidens-Gruvaktiebolag	Electrolytic
C. C. R.	Canadian Copper Refiners Ltd. (Montreal)	Electrolytic
C de P Peru	Cerro de Pasco Corporation	Electrolytic
C. C. C.	Chile Copper Company	Electrolytic
TADANAC	Consolidated Mining & Smelting Co.	Electrolytic
F E C	Falconbridge Nickel Mines, Ltd.	Electrolytic
K U E	Kennecott Copper Corp.	Electrolytic
L. M. C.	Lewin Metals Corporation	Electrolytic
M U F	Mufulira Copper Mines, Ltd.	Electrolytic
N A	Norddeutsche Affinerie	Electrolytic
O R C	Ontario Refining Co., Ltd.	Electrolytic
A. L. S.	Philps Dodge Refining Corp. (For Adolph Lewisohn Selling Corp.)	Electrolytic
L. N. S.	Phelps Dodge Refining Corp.	Electrolytic
P • D	Phelps Dodge Corporation	Electrolytic
N. E. C.	Raritan Copper Works	Electrolytic
R E C	Rhokana Corporation	Electrolytic
B O R	Rudnici Bakra i Topionice	Electrolytic
U M K	Union Miniere du Haut Katanga	Electrolytic
D R W	†United States Metals Refining Co.	Electrolytic
AMCO	†United States Metals Refining Co.	Electrolytic
OFHC	†United States Metals Refining Co.	Electrolytic
W E K	Zinnwerke Wilhelmsburg G.m.b.H.	Electrolytic

†Subsidiary, The American Metal Co., Ltd.

Brand or Marks	Producer	Grade
C & H	Calumet & Hecla Consolidated Copper Co.	Lake
C. R.	Copper Range Company	Lake
Q. M. CO.	Quincy Mining Company	Lake

Brand or Marks	Producer	Grade
B. C. R.	British Copper Refiners, Ltd.	Fire Refined High Conductivity
N. H. E.	Nassau Smelting & Refining Co., Inc.	Fire Refined High Conductivity

Brand or Marks	Producer	Grade
• • • (3 Star)	Braden Copper Company	Fire Refined (other than Lake & Fire Refined High Conductivity)
K C M	Kennecott Copper Corporation	
M T D	Messina (Transvaal) Development Co.	
P. D. M.	Phelps Dodge Corporation	
R	†United States Metals Refining Company	

Official List of Approved Refiners

Whose CATHODES are deliverable against Commodity Exchange, Inc., Copper Contract

American Smelting & Refining Co.
Anaconda Copper Mining Co.
Andes Copper Mining Co.
Bolidens Gruvaktiebolag
Canadian Copper Refiners, Ltd.
Cerro de Pasco Copper Corp.
Chile Copper Company
Consolidated Mining & Smelting Co.
Falconbridge Nickel Mines, Ltd.
Kennecott Copper Corp.
Lewin Metals Corp.
Mufulira Copper Mines, Ltd.
Norddeutsche Affinerie
Ontario Refining Co., Ltd.
Phelps Dodge Refining Corp.
Phelps Dodge Corporation
Raritan Copper Works
Rhokana Corporation
Rudnici Bakra i Topionice
Union Miniere du Haut Katanga
United States Metals Refining Co.
Zinnwerke Wilhelmsburg G.m.b.H.

Lead Brands

Refined At	Producer	Brand Mark
Federal, Ill., U. S.		•ALTON
Carteret, N. J., U. S.		**A M CO
Monterrey, Mexico		•ASARCO MONTERREY
Port Pirie, Australia		•B.H.A.S.
Indianapolis, Ind., U. S.		†aBLUE ARROW AMERICAN LEAD CORP
Braubach a/Rhein, Germany		•Braubach dopp. raff. Deutschland
Idaho, U. S.		•BUNKER "C" HILL
Aroya, Peru		•CERRO PERU
Collinsville, Ill., U. S.		†aCHEMICAL ST. L. S. & R. CO.
Monterrey, N. L., Mexico		**C.M.F. y A.M.
Alton, Ill., U. S.		•DOE RUN
Oker, Germany		•D.Raff.U.H.Blei
Joplin, Mo., U. S.		•EAGLE-PICHER
Kamioka, Japan		•E.M.K.
Stolberg, Rhineland, Germany		•Eschweiler raffine
Federal, Ill., U. S.		•FEDERAL
Chicago, Ill., U. S.		†G H
Hoboken, Belgium		•H.E.R. Escaut
Alton, Ill., U. S.		•HERCULANEUM
Omaha, Neb., U. S.		•ILR
Monsanto, Ill., U. S.		†MONSANTO
Monteponi, Italy		•Monteponi
San Gavino Monreale, Sardinia, Italy		•Montevecchio
Hammond, Ind., U. S.		†M R CO METALS REFINING CO.
Omaha, Neb., U. S.		•OMAHA & GRANT
Overpelt, Belgium		•Overpelt extra-raffine O.V.-L.L.-Dur.
Megrine, Tunis		•Penarroya
Penarroya, Sopwith & Cartagena, Spain		•Penarroya
Perth Amboy, N. J., U. S.		•PERTH AMBOY
Genoa, Italy		•Pertusola
Alton, Ill., U. S.		•ST. JOE
Collinsville, Ill., U. S.		†aST. L. S. & R. CO.
Selby, Calif., U. S.		•SELBY
Trail, B. C., Canada		•TADANAC
Baelen-Usines, Belgium		•Three Stars Vieille-Montagne Bar
Mexica, Yugoslavia		•TREPCA
Perth Amboy, N. J., U. S.		•TSUMCO
Hoboken, Belgium		•TSUMCO
Midvale, Utah, U. S.		•USS CO
E. Chicago, Ind., U. S.		•U S S CO ELECTRO
Norfolk, Va., U. S.		†aVIRGINIA

Federal, Ill., U. S.	American Smelting & Refining Co.
Carteret, N. J., U. S.	United States Metals Refining Co.
Monterrey, Mexico	American Smelting & Refining Co.
Port Pirie, Australia	Broken Hill Associated Smelters
Indianapolis, Ind., U. S.	American Lead Corp., The
Braubach a/Rhein, Germany	Blei-und Silberhutte Braubach
Idaho, U. S.	Bunker Hill Smelter
Aroya, Peru	Cerro de Pasco Copper Corp.
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.
Monterrey, N. L., Mexico	Compania Metalurgica Penoles, S.A.
Alton, Ill., U. S.	St. Joseph Lead Company
Oker, Germany	Unterharzer Berg- und Huttenwerke
Joplin, Mo., U. S.	Eagle-Picher Mining & Smelting Co.
Kamioka, Japan	Mitsui Mining Co.
Stolberg, Rhineland, Germany	Stolberger Zinc Aktiengesellschaft fur Bergbau und Hattenbetrieb
Federal, Ill., U. S.	Metals Refining Company
Chicago, Ill., U. S.	
Hoboken, Belgium	American Smelting & Refining Co.
Alton, Ill., U. S.	Goldsmith Bros. Smelting & Refining Co.
Omaha, Neb., U. S.	Societe Generale Metallurgizue de Hoboken
Monsanto, Ill., U. S.	St. Joseph Lead Company
Monteponi, Italy	International Smelting & Refining Co.
San Gavino Monreale, Sardinia, Italy	Lewin Metals Corp., The
Hammond, Ind., U. S.	Societa di Monteponi
	Montevecchio Societa Italiana del Piombo e dello Zinco
Omaha, Neb., U. S.	American Smelting & Refining Co.
Overpelt, Belgium	Compagnie des Metaux d-Overpelt-Lommel et de Corphalie, S.A.
Megrine, Tunis	Ste. Min. & Metall. de Penarroya
Penarroya, Sopwith & Cartagena, Spain	Ete Min. & Met. de Penarroya
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.
Genoa, Italy	Societa di Pertusola
Alton, Ill., U. S.	St. Joseph Lead Company
Collinsville, Ill., U. S.	St. Louis Smelting & Refining Co.
Selby, Calif., U. S.	American Smelting & Refining Co.
Trail, B. C., Canada	Consolidated Mining & Smelting Co. of Canada, Ltd.
Baelen-Usines, Belgium	Ste des Mines and Founderies de Zinc de la Vieille-Montagne Anglem
Mexica, Yugoslavia	Central European Mines, Limited
Perth Amboy, N. J., U. S.	American Smelting & Refining Co.
Hoboken, Belgium	The Tsumeb Corporation
Midvale, Utah, U. S.	United State Smelting, Refining & Mining Company
E. Chicago, Ind., U. S.	United States Smelting, Refining & Mining Company
Norfolk, Va., U. S.	Virginia Lead Smelting Corp., The

•Deliverable against Commodity Exchange, Inc., Lead Contracts without Certificate of Assay.

**Subsidiary of the American Metal Co., Ltd.

†Deliverable against Commodity Exchange, Inc., Lead Contracts with Certificate of Assay of one of the Official Assayers of the Exchange.

aSubsidiary of National Lead Co.

Copper Statistics Reported by Copper Institute

Combined Totals in U. S. A. and Outside U. S. A.

(In tons of 2,000 pounds)

	Crude Production		Refined	Deliveries to	Refined Stock	Stock Increases or Decreases		
	Primary	Secondary	Production	Customers	End of Period	Blister	Refined	Total
1951 Total	2,343,422	62,270	2,424,802	2,381,237	223,731	—19,110	+34,772	+15,662
1952 Total	2,362,887	55,858	2,385,538	2,451,093				
1953								
June	208,360	9,827	231,431	213,718	212,962	—13,244	+12,966	— 278
July	208,349	8,552	206,417	172,817	243,530	+ 1,018	+30,568	+31,586
Aug.	202,926	6,573	199,314	150,893	288,045	+ 7,960	+45,986	+53,946
Sept.	195,086	9,231	185,603	153,782	309,243	+18,714	+19,727	+38,441
Oct.	197,840	11,083	218,770	180,777	342,984	— 9,847	+33,741	+23,894
Nov.	180,169	6,541	198,239	180,917	354,370	—11,529	+11,386	— 143
Dec.	197,287	10,930	221,823	199,202	369,723	—11,945	+15,353	+ 3,408
1953 Total	2,397,540	123,210	2,514,969	2,275,060	369,723	+ 7,836	+180,762	+188,598
1954								
Jan.	191,564	7,835	196,653	169,386	388,631	+ 2,746	+20,389	+23,135
Feb.	177,075	7,096	174,360	163,474	393,792	+ 9,811	+ 5,161	+14,972
Mar.	196,870	8,254	211,370	189,030	405,563	— 6,241	+11,771	+ 5,525
April	195,823	6,662	200,364	203,772	397,593	+ 2,121	— 7,970	— 5,849
May	190,074	6,973	203,967	226,202	337,345	— 6,914	—60,248	—67,162
In U. S. A.								
1951 Total	964,589	56,910	1,199,784	1,367,787	71,528	.....	+22,488	.....
1952 Total	961,886	46,003	1,189,112	1,445,765				
1953								
Apr.	81,739	14,151	113,782	142,382	48,382	.....	— 7,425	.....
May	84.091	9,106	117,929	146,215	52,762	.....	+ 4,380	.....
June	75,838	9,110	127,294	139,300	58,126	.....	+ 5,364	.....
July	79,938	8,125	122,036	104,481	77,100	.....	+18,974	.....
Aug.	79,376	5,577	108,974	106,985	78,825	.....	+ 1,725	.....
Sept.	78,952	7,796	114,760	104,886	72,907	.....	— 5,918	.....
Oct.	83,433	9,002	126,138	110,519	84,303	.....	+11,396	.....
Nov.	79,934	5,790	119,230	100,908	93,274	.....	+ 8,971	.....
Dec.	78,500	10,232	123,296	112,244	89,193	.....	— 4,081	.....
1953 Total	957,434	109,972	1,395,003	1,443,719	89,193	.....	+30,335	.....
1954								
Jan.	76,912	7,304	111,555	77,091	108,121	.....	+20,409	.....
Feb.	68,034	6,394	103,496	87,795	118,417	.....	+10,296	.....
March	73,429	7,671	117,546	95,795	125,759	.....	+ 7,342	.....
April	70,977	6,486	112,617	104,579	124,523	.....	— 1,236	.....
May	71,459	6,717	108,403	111,005	82,111	.....	—43,412	.....
Outside U. S. A.								
1951 Total	1,378,883	5,360	1,225,018	1,013,450	152,203	.....	+12,284	.....
1952 Total	1,401,001	9,582	1,196,426	1,005,329				
1953								
June	132,522	717	106,951	77,232	154,836	.....	+ 7,602	.....
July	128,411	427	93,847	77,802	166,430	.....	+11,594	.....
Aug.	123,550	996	92,565	46,133	209,220	.....	+42,790	.....
Sept.	116,134	1,435	70,843	48,896	236,336	.....	+27,116	.....
Oct.	114,407	2,081	92,632	70,258	258,681	.....	+22,345	.....
Nov.	100,235	751	79,009	80,009	280,530	.....	+19,434	.....
Dec.	120,448	698	98,527	86,958	261,096	.....	+ 2,415	.....
1953 Total	1,441,874	13,238	1,119,966	831,341	280,530	.....	+150,427	.....
1954								
Jan.	114,652	531	85,100	91,941	280,510	.....	— 20	.....
Feb.	109,041	702	70,864	74,457	275,375	.....	— 5,135	.....
Mar.	123,441	583	93,824	93,235	279,804	.....	+ 4,429	.....
April	124,846	176	87,747	99,193	273,070	.....	— 6,734	.....
May	118,615	262	95,564	115,197	255,234	.....	—17,836	.....

*Excluding Russia, Yugoslavia, Norway, Sweden, Japan, Australia.

Electrolytic Copper

Price, Del. Conn. Valley
Monthly Average Prices
(Cents Per Pound)

	1951	1952	1953	1954
Jan.	24.50	24.50	24.50	29.88
Feb.	24.50	24.50	25.46	29.88
Mar.	24.50	24.50	31.49	29.93
Apr.	24.50	24.50	30.59	29.98
May	25.31	27.829	29.72	30.00
June	24.50	24.50	29.94	30.00
July	24.50	24.50	29.92	....
Aug.	24.50	24.50	29.69	....
Sept.	24.50	24.50	29.75	....
Oct.	24.50	24.50	29.80	....
Nov.	24.50	24.50	29.88	....
Dec.	24.50	24.50	29.88	....
Aver.	24.50	24.50	29.15	....

Lake Copper

Producers' Price, Delivered
Monthly Average Prices
(Cents Per Pound)

	1951	1952	1953	1954
Jan.	24.625	24.625	24.625	30.00
Feb.	24.625	24.625	24.625	30.00
Mar.	24.625	24.625	32.00	30.00
Apr.	24.625	24.625	32.23	30.00
May	24.625	24.625	Nom	30.00
June	24.625	24.625	30.125	30.00
July	24.625	24.625	30.125	....
Aug.	24.625	24.625	30.125	....
Sept.	24.625	24.625	30.125	....
Oct.	24.625	24.625	30.125	....
Nov.	24.625	24.625	30.125	....
Dec.	24.625	24.625	30.038	....
Aver.	24.625	24.625	29.47	....

Export Copper

Electrolytic f.a.s. New York
Monthly Average Prices
(Cents Per Pound)

	1951	1952	1953	1954
Jan.	24.50	27.50	34.825	28.635
Feb.	24.50	27.50	34.825	28.59
Mar.	24.50	27.50	35.131	29.544
Apr.	24.50	27.50	35.89	29.93
May	24.50	24.50	29.89	30.00
June	27.50	34.415	29.75	30.00
July	27.50	34.537	29.692	....
Aug.	27.50	34.825	29.075	....
Sept.	27.50	34.825	29.00	....
Oct.	27.50	34.825	29.053	....
Nov.	27.50	34.825	28.875	....
Dec.	27.50	34.825	28.774	....
Aver.	26.318	31.742	31.218	....

Fabricators' Copper Statistics

(In Tons of 2,000 Pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1948						
Total	.....	.....	.....	.....	1,394,307	.....
1949						
Total	.....	.....	.....	.....	1,053,225	.....
1950						
Total	.....	.....	.....	.....	1,438,327	.....
1951						
Nov.	256,913	36,914	287,648	311,110	114,577	—304,931
Dec.	280,402	32,147	295,385	303,050	106,536	—285,886
Total	.....	.....	.....	.....	1,392,111	.....
1952						
Jan.	267,427	36,239	294,202	292,932	131,988	—283,468
Feb.	258,279	42,911	291,475	292,069	115,150	—282,354
Mar.	254,868	34,085	292,932	309,855	116,887	—313,834
Apr.	256,798	39,834	288,673	318,198	106,109	—310,239
May	240,962	41,135	289,822	304,639	109,890	—312,364
June	245,730	39,513	286,576	299,124	107,709	—300,457
July	281,064	53,716	293,220	303,765	82,419	—262,205
Aug.	298,849	50,399	287,512	294,280	119,280	—232,544
Sept.	308,036	47,188	295,275	285,465	122,934	—225,516
Oct.	311,676	45,970	290,634	285,114	125,325	—218,102
Nov.	315,608	33,710	292,028	280,716	130,031	—223,426
Dec.	333,455	32,652	292,157	275,312	117,303	—201,362
Total	.....	.....	.....	.....	1,389,451	— .....
1953						
Jan.	321,212	43,195	294,467	275,736	134,203	—205,796
Feb.	312,177	52,990	290,367	296,760	123,850	—221,960
Mar.	319,356	47,685	292,447	291,979	122,980	—217,385
Apr.	342,771	53,501	295,096	298,532	116,319	—197,356
May	364,197	49,952	293,794	285,425	126,972	—165,070
June	363,020	40,759	297,387	268,099	132,615	—161,707
July	375,629	39,936	302,113	259,641	91,826	—146,189
Aug.	366,244	42,490	305,204	235,893	113,250	—132,363
Sept.	358,081	38,593	307,612	206,476	111,805	—117,414
Oct.	352,091	31,035	305,431	187,438	116,259	—109,743
Nov.	350,804	34,380	305,877	165,047	102,258	— 85,740
Dec.	380,881	25,022	309,664	170,917	83,652	— 74,678
Total	.....	.....	.....	.....	1,375,869	.....
1954						
Jan.	355,632	26,423	307,014	142,588	100,805	— 67,547
Feb.	349,661	26,227	305,670	122,999	94,975	— 52,781
Mar.	341,693	28,836	304,065	123,887	103,796	— 57,423
Apr	341,616	30,677	302,391	124,559	104,943	— 54,657
May	349,796	33,210	305,504	123,039	102,810	— 45,537

Scrap Copper Receipts by Custom Smelters and Refineries in United States*

(In Short Tons)

	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Jan.	3,247	3,077	7,080	10,172	17,084	15,763	6,640	4,528	6,486	9,859
Feb.	2,877	1,576	5,394	11,890	20,238	12,500	5,153	3,633	10,337	8,490
Mar.	4,398	2,116	9,187	11,954	20,678	13,538	7,912	5,243	19,991	9,738
Apr.	5,249	2,750	13,065	15,125	15,968	12,304	8,553	6,214	16,584	9,004
May	4,427	2,455	14,264	16,357	14,237	8,749	8,458	8,033	10,857	8,687
June	4,733	2,230	9,883	11,176	8,809	20,523	8,628	4,425	10,945	....
July	5,342	2,581	8,578	8,370	7,782	10,040	6,642	5,188	9,063	....
Aug.	5,353	2,117	8,572	17,081	8,246	10,452	6,113	5,003	7,137	....
Sept.	4,504	4,832	10,611	16,001	10,980	4,903	3,561	4,667	9,042	....
Oct.	4,615	2,932	8,532	10,854	6,401	9,459	3,336	4,602	10,065	....
Nov.	4,030	3,079	8,070	7,625	15,347	9,237	3,179	4,724	7,815	....
Dec.	3,411	4,081	9,154	11,826	10,533	7,178	4,538	6,208	11,476	....
Total 51,866		33,826	112,386	147,931	156,303	142,067	71,812	62,470	129,798	.....

*As compiled by Copper Institute.

Brass and Bronze Ingot Monthly Shipments

(Net Tons)

The following figures showing the combined shipments of ingot brass and bronze are compiled by the Ingot Brass and Bronze Industry and represent in excess of 95 per cent of the deliveries of the entire industry.

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
Jan.	43,569	41,021	29,196	27,841	26,998	19,456	18,874	28,416	28,315	24,423	20,661
Feb.	43,340	39,297	24,580	24,686	22,487	15,026	18,487	27,168	24,211	25,429	19,920
Mar.	45,068	41,988	27,176	27,477	24,282	14,550	22,494	31,997	23,890	28,256	23,653
Apr.	43,151	40,118	30,228	24,577	25,177	10,695	22,118	30,472	22,547	25,044	24,746
May	45,418	37,262	27,333	19,525	23,716	11,114	23,643	33,267	21,740	21,660	22,269
June	40,677	32,613	31,349	16,929	24,401	9,696	25,093	33,817	21,274	20,818	.....
July	40,532	27,995	26,677	16,728	20,456	10,220	21,609	32,016	18,947	19,321	.....
Aug.	40,957	25,372	27,896	18,589	24,098	14,194	26,689	25,285	21,807	20,156	.....
Sept.	38,333	20,165	27,390	19,025	23,641	16,208	28,811	22,285	22,770	21,463	.....
Oct.	41,009	23,527	31,461	22,806	21,559	18,026	32,240	23,124	25,811	22,280	.....
Nov.	38,845	22,966	29,232	21,666	21,731	18,488	31,748	23,544	23,441	21,860	.....
Dec.	35,518	20,488	27,206	23,862	20,954	17,960	28,757	20,987	22,983	20,541	.....
Total ...	496,412	372,812	339,724	263,711	279,500	175,643	303,563	332,378	277,736	271,251	.....
Aver.	41,368	31,608	28,310	21,976	23,292	14,637	25,297	27,615	23,145	22,604	.....

Mine Production of Copper in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern	Missouri	Western	Total
1949				
Ttl.	32,955	3,670	716,121	752,750
1950				
Ttl.	40,105	2,982	866,250	885,942
1951				
Ttl.	41,119	2,422	884,788	928,330
1952				
Ttl.	36,758	1,726	885,985	924,469
1953				
Jan.	3,406	150	73,956	77,512
Feb.	3.095	197	69,025	72,317
Mar.	3,341	169	77,376	80,886
Apr.	3,544	164	75,998	79,706
May	2,872	150	77,828	80,850
June	3,128	173	70,334	73,635
July	3,440	183	72,869	76,492
Aug.	3,049	146	72,386	75,581
Sept.	3,029	199	72,214	75,442
Oct.	3,604	219	76,146	80,005
Nov.	3,043	180	71,942	75,165
Dec.	3,482	170	73,367	77,019
Ttl.	39,069	2,100	883,440	924,600
1954				
Jan.	3,077	147	71,473	74,697
Feb.	2,949	183	62,167	65,299
Mar.	3,560	148	67,581	71,289
Apr.	3,047	153	64,565	67,765

Average Custom Smelters' Scrap Buying Prices

(Cents per pound del. refinery for 60,000 lbs. of each grade)

	No. 1 Copper Scrap	No. 2 Copper Scrap	Light Copper Scrap	Refinery Brass*
1953				
May	23.90	22.43	20.85	20.06
June	23.942	22.442	20.942	20.077
July	23.56	22.31	21.13	20.38
Aug.	22.08	20.58	19.08	17.06
Sept.	23.50	22.00	20.50	19.00
Oct.	23.875	22.192	20.692	19.00
Nov.	25.00	23.00	21.50	19.50
Dec.	24.46	22.73	21.23	19.50
Av.	33.955	20.405	20.855	20.036
1954				
Jan.	23.48	21.98	20.48	19.22
Feb.	24.00	22.50	21.00	20.00
Mar.	25.84	23.97	22.10	21.09
Apr.	26.42	24.92	23.42	21.77
May	27.04	25.54	24.04	22.58
June	27.125	25.625	24.125	22.875

*Of dry content for material having a dry copper content in excess of 60%.

Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)

(Cents per pound for carload lots del. consumers' works)

	No. 1 Copper Scrap	No. 2 Copper Scrap	No. 1 Composition	Heavy Yellow Brass
1953				
May	22.84	21.40	17.81	13.71
June	23.942	22.442	18.14	13.97
July	23.67	22.29	18.28	14.02
Aug.	21.35	20.51	17.86	12.57
Sept.	23.00	21.50	17.25	13.25
Oct.	24.096	22.692	17.481	13.163
Nov.	25.00	23.50	18.25	13.75
Dec.	24.77	22.15	18.17	13.67
Av.	23.524	21.934	18.862	14.127
1954				
Jan.	23.68	22.02	18.08	13.61
Feb.	24.50	23.00	17.75	13.50
Mar.	25.53	24.03	18.49	14.16
Apr.	26.39	24.89	20.02	15.35
May	27.03	25.53	21.50	16.50
June	27.01	25.51	21.50	16.50

United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics)
(In tons of 2,000 lbs.)

	Stock At Beginning	Production Primary & Secondary	Total Supply	Stock At End	Domestic Shipments
1948	21,328	511,356	532,684	38,644	490,630
1949	38,644	542,676	581,320	70,424	355,905
1950	70,424	571,763	642,187	35,619	499,637
1951	35,619	486,874	522,493	25,339	496,184
1952					
December	35,686	48,651	84,337	43,560	39,370
Total	.....	532,778	558,117	.....	492,094
1953					
January	43,560	47,295	90,855	52,760	35,529
February	52,760	45,423	98,183	58,949	36,811
March	58,949	47,993	106,942	62,371	42,242
April	62,371	46,729	109,100	69,608	39,487
May	69,608	43,187	112,795	63,879	48,914
June	63,879	36,880	100,759	56,569	44,140
July	56,569	40,210	96,779	61,017	35,652
August	61,017	38,022	99,039	58,103	40,836
September	58,103	42,154	100,257	58,490	41,598
October	58,490	44,741	103,231	58,236	44,987
November	58,236	52,562	110,798	67,494	43,234
December	67,494	48,687	116,181	81,152	35,007
Total	.....	533,883	577,443	.....	488,437
1954					
January	81,152	48,518	129,670	92,496	37,108
February	92,496	42,046	134,542	97,981	36,551
March	97,981	50,808	148,789	100,927	47,837
April	100,927	46,730	147,657	100,441	47,161
May	100,441	49,139	149,580	109,302	40,183

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

Industrial Classification of Domestic Lead Shipments

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Cable	Amm.	Foil	Batt'y	Brass Making	Sundries	Jobbers	Unclassified
1948	**114,253**	**42,080**	**2,258**	**97,637**	**4,921**	**41,524**	**8,076**	**215,150**
1949	**56,273**	**12,443**	**1,139**	**72,475**	**3,190**	**37,549**	**4,117**	**168,719**
1950	66,646	28,854	3,304	93,297	6,374	60,118	10,450	230,594
1951	70,149	32,099	2,063	75,337	5,583	48,248	3,550	259,155
1952								
Mar.	7,055	1,675	187	3,907	757	3,616	441	21,523
Apr.	7,132	2,054	25	5,752	406	3,543	250	18,750
May	6,904	1,350	50	4,875	346	2,703	622	12,694
June	5,981	3,174	60	6,492	235	3,750	668	19,143
July	4,654	3,677	175	8,339	450	6,071	663	25,676
Aug.	6,330	2,401	100	7,773	276	4,540	685	19,164
Sept.	7,899	3,224	80	9,929	226	4,282	458	19,720
Oct.	7,548	2,475	60	7,221	480	3,668	318	19,200
Nov.	5,714	2,434	150	5,855	595	7,927	514	25,072
Dec.	5,536	2,594	110	5,840	385	3,319	253	21,333
Total	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953								
Jan.	5,183	1,554	186	5,567	352	3,763	204	18,720
Feb.	6,248	4,509	61	6,098	438	3,267	417	15,773
Mar.	6,175	2,796	323	7,011	415	5,641	509	19,372
Apr.	5,833	3,103	102	8,369	295	3,711	453	17,621
May	6,829	3,450	370	8,480	752	5,118	605	23,310
June	6,420	3,315	290	7,018	528	5,892	196	20,481
July	5,123	3,161	35	6,304	205	5,047	168	15,609
Aug.	5,226	2,335	120	9,435	745	5,382	268	17,325
Sept.	6,494	2,162	105	7,274	1,088	5,261	199	19,015
Oct.	9,612	2,782	160	6,346	307	4,628	1,987	19,165
Nov.	6,920	3,352	312	4,452	385	4,876	982	21,955
Dec.	6,220	1,896	72	3,985	206	3,350	402	18,876
Total	76,283	34,415	2,136	80,339	5,716	55,936	6,390	227,222
1954								
Jan.	6,273	2,955	....	5,077	964	5,051	628	16,160
Feb.	6,040	2,170	....	5,890	798	3,682	254	17,717
Mar.	7,620	2,405	252	6,663	149	6,818	492	23,438
Apr.	6,267	2,550	361	6,341	308	5,194	342	25,798
May	6,030	2,310	276	5,635	250	4,621	1,020	20,041

Lead Prices at New York

(Common Grade)
Monthly Average Prices
(Cents per pound)

	1951	1952	1953	1954
Jan.	17.00	19.00	14.192	13.26
Feb.	17.00	19.00	13.50	12.82
Mar.	17.00	19.00	13.404	12.94
Apr.	17.00	18.92	12.64	13.91
May	17.00	15.731	12.75	14.00
June	17.00	15.26	13.413	14.11
July	17.00	16.00	13.683	....
Aug.	17.00	16.00	14.00	....
Sept.	17.00	16.00	13.74	....
Oct.	18.926	14.426	13.50	....
Nov.	19.00	14.18	13.50	....
Dec.	19.00	14.125	13.50	....
Av.	17.494	16.47	13.485	....

Lead Sheet Prices

(To Jobbers, Full Sheets)
Monthly Average Prices
(Cents per pound)

	1951	1952	1953	1954
Jan.	22.00	24.00	19.192	18.26
Feb.	22.00	24.00	18.50	17.82
Mar.	22.00	24.00	18.404	17.94
Apr.	22.00	23.92	17.64	18.91
May	22.00	20.81	17.75	19.00
June	22.00	20.65	19.413	19.11
July	22.00	21.00	18.683	....
Aug.	22.00	21.00	19.00	....
Sept.	22.00	21.00	18.74	....
Oct.	22.44	19.48	18.50	....
Nov.	24.00	19.18	18.50	....
Dec.	24.00	19.125	18.50	....

Battery Shipments

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers.

(In thousands of units)

	1951	1952	1953	1954
Jan.	1,979	1,639	1,571	1,788
Feb.	1,469	963	1,162	1,422
Mar.	1,176	769	1,202	1,194
Apr.	1,892	850	1,245	1,150
May	1,480	1,137	1,455	1,396
June	1,443	1,535	2,004	....
July	1,705	2,526	2,528	....
Aug.	2,239	2,905	2,707	....
Sept.	2,172	2,874	2,852	....
Oct.	2,640	3,112	2,825	....
Nov.	2,232	2,168	2,173	....
Dec.	1,792	1,975	1,890	....
Total	22,219	22,453	23,614	....

Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics)

(In tons of 2,000 lbs.)

	In ore and matte and in process at smelters	— In base bullion (lead content) — At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti-monial lead	Total Stocks
1946 ..	89,462	8,618	4,889	15,097	37,584	7,283	162,933
1947 ..	111,836	8,453	4,911	16,042	40,870	6,717	188,829
1948 ..	77,199	7,652	5,447	16,328	13,634	7,694	127,954
1949 .	76,373	9,697	4,101	17,939	29,050	9,594	146,754
1950 .	69,417	13,351	4,959	12,903	33,420	7,490	141,540
1951 ..	74,750	12,021	3,771	13,381	19,319	6,552	129,794
1952							
Nov. 1	70,600	19,464	2,488	19,058	26,751	10,967	149,328
Dec. 1	69,696	15,518	4,992	17,614	24,543	11,143	143,506
1953							
Jan. 1	65,771	17,583	3,105	19,759	31,405	12,155	149,778
Feb. 1	62,565	18,181	1,757	19,090	41,188	11,572	154,353
Mar. 1	61,820	11,651	4,784	21,853	48,213	10,736	159,057
Apr. 1	61,036	13,656	2,506	21,464	50,887	11,484	161,033
May 1	56,867	14,490	1,936	20,010	58,360	11,248	162,911
June 1	56,892	13,299	3,181	20,135	53,115	10,764	157,386
July 1	65,655	14,237	2,250	20,865	42,234	14,335	159,576
Aug. 1	69,771	15,742	2,907	22,290	46,770	14,247	171,727
Sept. 1	83,673	15,332	2,964	22,960	43,355	14,748	183,032
Oct. 1	81,377	16,921	3,549	24,717	42,613	15,877	185,054
Nov. 1	79,283	19,446	2,664	26,785	42,494	15,742	186,414
Dec. 1	73,348	19,916	2,868	24,303	50,996	16,498	187,929
1954							
Jan. 1	67,688	17,920	2,867	26,713	65,036	16,116	196,340
Feb. 1	63,032	12,790	3,406	28,050	77,805	14,691	199,774
Mar. 1	63,175	12,226	4,482	28,140	83,183	14,798	206,044
Apr. 1	68,520	13,377	2,631	28,841	88,942	11,985	214,296
May 1	67,270	14,624	2,715	28,257	88,464	11,977	213,307
June 1	64,103	10,906	1,348	27,105	97,420	11,882	212,764

Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

	Receipts of lead in ore			Receipts of lead in scrap etc. (b)	Total receipts in ore, & scrap
	United States	Foreign	Total		
1947 Total	401,336	52,347	453,683	71,480	525,163
1948 Total	387,967	70,994	458,961	47,898	506,859
1949 Total	420,122	93,061	513,183	58,447	571,630
1950 Total	430,072	76,160	506,232	43,666	549,898
1951 Total	376,851	75,515	452,366	36,510	488,876
1952					
May	36,149	6,989	43,138	4,763	47,901
June	32,962	3,173	36,135	1,983	38,118
July	28,829	6,668	35,497	2,539	38,036
August	32,393	11,166	43,559	2,560	46,119
September	32,919	5,095	38,014	3,549	41,563
October	33,770	6,925	40,695	3,707	44,402
November	30,537	14,009	44,546	2,663	47,209
December	32,769	10,317	43,086	3,690	46,776
Total	405,990	98,276	504,266	41,845	546,111
1953					
January	30,697	10,191	40,888	3,887	44,775
February	30,388	10,008	40,396	2,935	43,331
March	32,660	12,974	45,634	2,513	48,147
April	31,557	8,895	40,452	2,675	43,127
May	28,793	11,856	40,649	2,019	42,668
June	30,753	11,611	42,364	3,441	45,805
July	27,339	17,082	44,421	4,061	48,482
August	27,709	19,548	47,257	5,562	52,819
September	27,637	12,190	39,827	4,625	44,452
October	27,934	17,063	44,997	3,680	48,677
November	26,904	13,603	40,507	4,016	44,523
December	28,812	10,767	39,579	3,580	43,159
Total	351,183	155,788	506,971	42,994	549,965
1954					
January	26,202	13,309	39,511	3,162	42,673
February	29,342	10,888	40,230	3,373	43,603
March	31,520	12,006	43,526	3,550	47,076
April	28,508	13,173	41,681	4,524	46,205
May	25,762	11,141	36,903	4,484	41,387

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

N. Y. Lead Price Changes

(Effective Date)

1949		Oct. 7	15.00
July 12	13.50	Oct. 14	14.00
July 13	14.00	Oct. 22	13.50
July 25	14.25	Nov. 3	14.00
July 27	14.50	Nov. 10	14.20
Aug. 2	14.75	Nov. 11	14.50
Aug. 18	15.125	Nov. 20	14.25
Sept. 26	14.75	Nov. 24	14.00
Oct. 3	14.25	Dec. 22	14.25
Oct. 7	13.75	Dec. 29	14.50
Oct. 14	13.00	Dec. 31	14.75
Nov. 10	12.75	1953	
Nov. 16	12.50	Jan. 7	14.50
Nov. 21	12.00	Jan. 12	14.00
1950		Feb. 2	13.50
Mar. 9	11.00	Mar. 4	13.00
Mar. 14	10.50	Mar. 10	13.50
Apr. 20	10.75	Apr. 7	13.00
Apr. 26	11.00	Apr. 16	12.50
May 4	11.25	Apr. 21	12.00
May 10	11.50	Apr. 29	12.50
May 11	12.00	May 18	12.75
June 23	11.50	May 19	13.00
1951		May 26	13.15
June 28	11.00	June 11	13.50
July 12	11.50	July 20	13.75
July 13	12.00	July 23	14.00
Aug. 15	13.00	Sept. 16	13.50
Aug. 21	14.00	1954	
Sept. 1	15.00	Jan. 18	13.00
Sept. 8	16.00	Feb. 18	12.50
Oct. 2	**19.00	Mar. 9	12.75
Oct. 31	17.00	Mar. 10	13.00
1952		Mar. 26	13.25
Apr. 29	18.00	Mar. 29	13.50
May 2	17.00	Apr. 1	13.75
May 12	15.00	Apr. 12	14.00
June 23	15.50	June 2	14.25
June 24	16.00	June 15	14.00

*OPA Ceiling. †Returned to OPA Ceiling. **OPS Ceiling.

Antimonial Lead Stocks at Primary Refineries

(A. B. M. S.)

(In tons of 2,000 lbs.)

End of:	1951	1952	1953	1954
Jan.	7,293	7,430	11,572	14,961
Feb.	8,738	7,805	10,736	14,798
Mar.	7,894	9,169	11,484	11,985
Apr.	8,269	9,646	11,248	11,977
May	8,519	9,931	10,764	11,882
June	7,044	10,323	14,335	.....
July	8,854	10,049	14,247	.....
Aug.	7,215	11,253	14,748	.....
Sept.	6,998	9,874	15,877	.....
Oct.	6,543	10,967	15,742	.....
Nov.	6,552	11,143	16,498	.....
Dec.	6,821	12,155	16,116	.....

Antimonial Lead Production by Primary Refineries

(A. B. M. S.)

(In tons of 2,000 lbs.)

End of:	1951	1952	1953	1954
Jan.	6,356	5,767	2,937	3,768
Feb.	6,504	4,395	3,682	4,257
Mar.	5,617	3,800	5,353	4,475
Apr.	5,406	3,162	5,027	4,470
May	4,378	2,347	6,497	4,373
June	4,361	5,303	9,270	....
July	7,624	6,352	5,259	....
Aug.	2,716	6,492	4,668	....
Sept.	4,227	4,748	5,509	....
Oct.	4,862	5,867	5,100	....
Nov.	6,943	4,674	5,400	....
Dec.	6,317	3,947	3,060	....
Total	65,311	56,854	61,762	.....

U. S. Lead Consumption

(Bureau of Mines — In Short Tons)

Metal Products	1954 Jan.–Apr.	Mar.	Apr.
Ammunition	13,762	3,632	3,564
Bearing metals	9,984	2,416	2,021
Brass and bronze	6,908	1,739	1,707
Cable covering	44,952	11,638	11,137
Calking lead	14,183	3,963	4,241
Casting metals	2,676	688	658
Collapsible tubes	3,184	813	849
Foil	1,147	319	560
Pipes, traps and bends	7,963	2,238	2,305
Sheet lead	8,364	2,265	2,214
Solder	22,939	6,182	5,641
Storage batteries (antimonial lead)	54,107	14,572	14,044
(oxides)	51,726	13,214	13,341
Terne metal	470	122	120
Type metal	8,994	2,131	2,667
Total	251,359	65,932	65,069
Pigments:			
White lead	5,184	1,192	1,476
Red lead and litharge	26,853	6,283	7,374
Pigment colors	4,651	1,232	1,411
Other†	3,015	775	719
Total	39,703	9,482	10,980
Chemicals:			
Tetraethyl lead	53,493	12,830	13,475
Misc. chemicals	3,151	1,312	677
Total	56,644	14,142	14,152
Misc. Uses:			
Annealing	1,291	333	339
Galvanizing	510	143	93
Lead plating	204	39	70
Weights and ballast	2,213	543	631
Total	4,218	1,058	1,133
Other Uses Unclassified	5,004	1,611	1,406
Total Reported	356,928	92,225	92,740
Estimated unreported consumption	4,000	1,000	1,000
Total	360,900	93,200	93,700
Daily average‡	3,008	3,006	3,123

† Includes lead content of leaded zinc oxide production.

‡ Based on number of days in month without adjustment for Sundays or holidays.

U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 pounds)

	1952	1953	1954
Jan.	27,986	27,192	25,786
Feb.	25,096	24,552	25,837
Mar.	24,695	25,226	29,442
Apr.	22,359	24,869	25,820
May	24,093	24,350	.....
June	21,903	23,612	.....
July	23,746	23,455	.....
Aug.	18,542	20,599	.....
Sept.	24,902	27,426	.....
Oct.	28,946	28,014	.....
Nov.	26,996	27,358	.....
Dec.	24,056	26,582	.....
Total	293,320	303,753	.....

American Antimony

Monthly Average Prices in bulk, f.o.b. Laredo (Cents per lb. in ton lots)

	1951	1952	1953	1954
Jan.	35.46	50.00	34.50	28.50
Feb.	42.00	50.00	34.50	28.50
Mar.	42.00	50.00	34.50	28.50
Apr.	42.00	48.85	34.50	28.50
May	42.00	42.077	34.50	28.50
June	42.00	39.00	34.50	28.50
July	42.00	39.00	34.50	....
Aug.	42.00	39.00	34.50	....
Sept.	42.00	39.00	34.50	....
Oct.	42.00	39.00	34.50	....
Nov.	44.738	35.61	33.68	....
Dec.	50.00	34.50	28.50	....
Av.	42.354	42.17	33.93	....

Consumers' Lead Stocks, Receipts and Consumption

(Bureau of Mines — In Short Tons)

	Stocks at plants on Mar. 31	Received during Apr.	Consumed during Apr.	Stocks at plants on Apr. 30
Refined soft lead	*65,628	65,138	61,380	69,386
Antimonial lead	*16,875	21,955	21,692	17,138
Unmelted white scrap	2,890	2,404	1,882	3,412
Percentage metals	7,912	3,188	3,196	7,904
Copper-base scrap	1,417	1,567	1,602	1,382
Drosses, residues, etc.	7,260	3,352	2,288	8,324
Total	*101,982	97,604	†92,040	107,546

* Revised.

† Excludes 700 tons of lead contained in leaded zinc oxide production.

Consumption of Lead by Class of Product

(Bureau of Mines — In Short Tons)

	Soft and Antimonial Lead	Scrap, Percentage Metal, Drosses, Etc.	Total
Metal products	56,237	8,832	65,069
Pigments	10,280	...	10,280
Chemicals	14,152	...	14,152
Miscellaneous	1,133		1,133
Unclassified	1,270	136	1,406
Total	83,072	8,968	†92,040

‡ Excludes 700 tons of lead contained in leaded zinc oxide production.

Lead Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in pigs, bars, etc.: metric tons except where otherwise noted.

IMPORTS

	1954 Feb.	Mar.	Apr.
U. S. (s.t.)‡	16,911	21,149†	28,496
Canada (s.t.)	...	1	...
Belgium	1,555	2,056	...
Denmark	961	1,248	2,665
France	3,444	4,057	2,822
Germany*	2,823	5,764	...
Italy**	1,084	...	..
Netherlands	3,968	4,069	...
Norway	1,453	285	...
Sweden	497	2,197	1,265
Switzerland	736	830	1,051
U. K. (l.t.)	15,368	14,509	15,796
India (l.t.)	970	979	...

EXPORTS

U. S. (s.t.)‡	49	41	56
Canada (s.t.)	7,560	11,091	9,606
Belgium	2,160	4,475	...
Denmark	539	711	626
France	1,410	223	318
Germany*	1,688	2,367	...
Italy**	1	...	...
Netherlands	887	1,013	...
Switzerland	...	...	30
Northern Rhodesia (l.t.)	406	1,102	...
Australia (l.t.)	11,814	...	...

† Revised.

‡ Refined.

* Includes scrap.

** Includes lead alloys.

French Lead Imports

(A.B.M.S.)

(In metric tons)

	1954 Mar.	Apr.	May
Ore (gross weight)	9,096	5,290	6,910
Algeria	...	...	5
Fr. Morocco	8,096	4,242	6,338
Fr. Equat. Africa	1,000	1,048	269
Greece	...	...	298
Pig lead:			
Argentiferous	...	...	600
Morocco	...	...	600
Non-argentiferous	4,057	2,822	4,278
Mexico	...	101	...
Belgium	...	...	12
Germany (W.)	1,196	401	246
Norway	270	...	...
Algeria	17	13	...
Fr. Morocco	261	549	2,447
Tunisia	2,262	1,656	1,573
U. of S. Africa	...	100	...
Australia	51	...	...
Other countries	...	2	...
Antimonial lead	4	...	340

U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1954 Mar.	Apr.	May
Gross Weight			
Lead and lead alloys	14,509	15,796	17,299
Australia	9,278	11,967	12,944
Canada	1,650	2,450	2,750
Yugoslavia	849	200	1,000
United States	1,156	400	100
Peru	1,576	650	25
Other countries	129	480	

Domestic Zinc Statistics

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

(Tons of 2,000 lbs.)

	Stock Beginning	Production	Shipments: Domestic	Shipments: Export & Drawback	Shipments: Gov't Acc't	Shipments: Total	Stock at End	Unfilled Orders at End	Daily Avg. Prod.
1947 Total		848,027	698,281	117,305	140,230	955,816			
1947 Monthly Avg.		70,669	58,190	9,775	11,686	79,651			2,323
1948 Total		850,015	770,396	69,910	57,598	897,904			
1948 Monthly Avg.		70,842	64,200	5,826	4,800	74,826			2,328
1949 Total		870,113	648,285	56,929	91,526	796,740			
1949 Monthly Ave.		72,509	54,024	4,744	7,627	66,395			2,384
1950 Total		910,354	849,246	18,189	128,256	995,691			
1950 Monthly Avg.		75,863	70,770	1,516	10,688	82,974			2,494
1951 Total		931,833	836,800	32,067	39,949	918,816			
1951 Monthly Avg.		77,653	69,733	3,506	3,329	76,568			2,553
1952									
Mar.	26,551	85,028	79,897	5,275	403	85,575	26,004	66,620	2,743
Apr.	26,004	83,001	72,716	9,123	3,753	85,592	23,423	56,838	2,767
May	23,423	83,797	63,701	5,425	4,950	74,076	33,144	41,494	2,703
June	33,144	77,463	35,769	7,757	3,739	47,265	63,342	39,428	2,582
July	63,342	76,930	38,714	3,146	1,493	43,353	96,919	46,547	2,482
Aug.	96,919	78,167	72,963	4,091	1,381	78,435	96,651	44,522	2,521
Sept.	96,651	76,019	69,343	3,654	5,132	78,129	94,541	42,791	2,534
Oct.	94,541	80,588	71,659	3,827	4,301	79,787	95,342	37,533	2,600
Nov.	95,342	78,563	81,439	4,625	4,692	90,756	83,149	32,255	2,619
Dec.	83,149	81,363	71,175	2,615	3,562	77,352	86,160	45,264	2,627
Total		961,430	803,343	56,202	36,626	896,171			
Monthly Avg.		80,119	66,945	4,683	3,052	74,681			2,627
1953									
Jan.	87,160	81,994	77,573	2,205	901	80,679	88,475	39,782	2,645
Feb.	88,475	76,899	67,729	1,997	1,984	71,710	93,664	37,172	2,746
Mar.	93,664	83,485	72,388	1,315	3,582	77,285	99,864	54,524	2,693
Apr.	99,864	80,459	78,211	215	7,617	86,043	94,280	38,722	2,681
May	94,280	82,422	75,648	259	8,343	84,250	92,452	43,271	2,659
June	92,452	81,617	72,612	36	4,136	76,784	97,285	44,307	2,721
July	97,285	80,825	69,498	94	4,612	74,204	103,906	32,327	2,607
Aug.	103,906	83,241	65,450	428	3,372	69,250	117,897	32,988	2,685
Sept.	117,897	81,211	55,167	165	2,215	57,547	141,561	27,323	2,704
Oct.	141,561	84,031	65,470	482	1,223	67,175	158,417	25,950	2,711
Nov.	158,417	75,891	63,617	2,848	2,220	68,685	165,623	29,437	2,530
Dec.	165,623	79,116	55,487	6,282	2,127	63,896	180,843	35,466	2,552
Total	.....	971,191	818,850	16,326	42,332	877,508	.....	.....	2,661
Monthly Avg.		80,933	68,238	1,361	3,528	73,126			2,661
1954									
Jan.	180,843	78,561	54,865	3,681	2,146	60,692	198,712	26,378	2,534
Feb.	198,712	68,020	57,781	7,179	1,778	66,738	199,994	28,943	2,429
Mar.	199,994	71,186	66,929	1,703	1,448	70,080	201,100	31,702	2,296
Apr.	201,100	70,255	67,512	977	2,489	70,616	200,740	31,702	2,342
May	200,740	73,645	61,859	670	2,037	64,566	209,828	38,624	2,376
June	209,828	71,466	72,257	2,297	5,685	80,239	201,055	33,100	2,382

U. S. Consumption of Slab Zinc

Bureau of Mines

By Industries (Short Tons)

	Galvanizers	Zn-base alloy	Brass products	Rolled zinc	Zinc oxide & other	Total
1947 Total	359,583	215,002	108,591	71,151	26,328	780,675
1948 Total	365,979	232,482	107,422	76,672	24,247	806,802
1949 Total	348,544	197,387	84,257	55,100	17,643	702,931
1950 Total	434,094	281,385	136,451	67,779	27,656	947,365
1951 Total	386,373	266,442	141,456	64,000	28,738	887,009
1952						
March	34,804	18,820	12,020	3,666	2,660	71,970
April	32,030	18,069	11,437	4,281	2,704	68,521
May	32,959	17,420	11,025	3,797	2,793	67,994
June	12,215	15,007	10,307	3,593	2,190	43,312
July	12,160	13,422	8,137	3,339	1,817	38,875
August	34,840	17,314	11,782	4,814	1,859	70,609
September	37,394	21,178	13,682	4,478	2,097	78,829
October	40,466	23,286	17,258	4,938	2,937	88,885
November	36,333	21,493	14,776	4,372	3,087	80,061
December	36,717	25,146	16,212	4,699	3,217	85,991
Total	375,563	236,022	155,311	51,508	30,885	849,289
1953						
January	36,974	27,465	16,739	4,593	3,332	89,103
February	34,882	27,092	14,880	3,914	3,330	84,098
March	37,375	30,651	17,494	5,360	3,572	94,452
April	36,181	29,790	17,162	5,109	3,302	91,544
May	34,790	27,398	17,748	5,082	3,408	88,426
June	32,758	27,099	17,564	5,309	3,129	85,859
July	30,535	22,832	12,361	4,053	3,250	73,031
August	33,074	22,740	15,739	4,440	3,107	79,100
September	33,465	21,745	13,374	4,329	3,221	76,134
October	34,354	22,854	13,709	4,077	3,077	78,071
November	29,989	21,408	9,779	3,887	2,482	67,545
December	28,785	24,272	10,758	3,631	2,827	70,273
Total	403,162	305,346	177,301	53,784	38,037	977,636
1954						
January	26,731	21,804	10,266	4,014	3,029	65,844
February	27,243	22,184	8,486	4,035	2,230	64,178
March	31,298	26,549	9,026	4,246	2,520	73,939
April	32,970	24,176	8,181	3,933	2,395	72,005

Prime Western Zinc Prices

(East St. Louis)

Average Prices, Cents Per Pound

	1951	1952	1953	1954
Jan.	17.50	19.50	12.596	9.76
Feb.	17.50	19.50	11.48	9.375
Mar.	17.50	19.50	11.024	9.66
Apr.	17.50	19.50	11.00	10.25
May	17.50	19.50	11.00	10.29
June	17.50	15.74	11.00	10.96
July	17.50	15.00	11.00	....
Aug.	17.50	14.077	11.00	....
Sept.	17.50	14.01	10.18	....
Oct.	19.426	13.306	10.00	....
Nov.	19.50	12.50	10.00	....
Dec.	19.50	12.50	10.00	....
Av.	17.994	16.22	10.857	....

High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

(Cents per pound)

	1951	1952	1953	1954
Jan.	18.85	20.85	13.946	11.11
Feb.	18.85	20.85	12.83	10.725
Mar.	18.85	20.85	12.379	11.01
Apr.	18.85	20.85	12.35	11.60
May	18.85	20.85	12.35	11.64
June	18.85	17.09	12.35	12.31
July	18.85	16.35	12.47*	....
Aug.	18.85	15.427	12.60*	....
Sept.	18.85	15.36	11.53	....
Oct.	20.776	14.656	11.35	....
Nov.	20.85	13.85	11.35	....
Dec.	20.85	13.85	11.35	....
Av.	19.344	17.57	12.207	....

*East of Continental Divide.

U. K. Zinc Consumption

(British Bureau of Non-Ferrous Metal Statistics)

	1952	1953	1954
Jan.	26,206	21,179	25,615
Feb.	24,454	20,311	25,286
Mar.	24,697	21,662	29,001
Apr	22,072	20,421	26,084
May	21,938	20,105	.....
June	19,637	21,141	.....
July	18,807	19,226	.....
Aug.	16,511	17,341	.....
Sept.	21,192	26,465	.....
Oct.	22,264	26,865	.....
Nov.	19,570	26,982	.....
Dec.	18,256	26,689	.....
Total	255,657	269,170	.....

Mine Production of Zinc in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1949				
Total	156,334	78,284	349,264	583,882
1950				
Total	170,726	82,300	365,175	618,207
1951				
Total	188,525	92,457	398,128	679,111
1952				
Dec.	14,791	6,299	28,699	49,789
Total	185,939	94,410	385,652	666,001
1953				
Jan.	16,529	7,931	28,560	53,002
Feb.	15,351	7,360	26,645	49,356
Mar.	16,954	7,529	27,197	51,680
Apr.	16,215	7,459	27,429	51,103
May	14,864	6,851	26,075	47,790
June	15,628	5,015	25,722	46,365
July	15,640	2,771	23,894	42,305
Aug.	14,288	3,104	23,573	40,965
Sept.	14,169	2,841	22,178	39,188
Oct.	14,741	2,821	21,209	38,771
Nov.	14,524	1,990	19,946	36,460
Dec.	14,709	1,646	21,390	37,745
Total	183,612	57,300	293,818	534,730
1954				
Jan.	13,772	4,575	20,505	38,852
Feb.	14,379	4,733	19,010	38,122
Mar.	15,242	5,462	20,548	41,252
Apr.	14,188	4,863	20,894	39,945
May	13,746	5,123	20,538	39,407

* Includes Alaskan output in some months.

Mine Production of Lead in United States

(U. S. Bureau of Mines)

(In short tons)

	Eastern States	Central States	Western States	Total U.S.*
1949				
Ttl.	8,719	156,400	238,843	404,032
1950				
Ttl.	8,470	163,489	257,766	429,875
1951				
Ttl.	7,426	152,258	230,723	390,428
1952				
Dec.	910	11,264	17,368	29,542
Ttl.	11,252	150,302	228,607	390,161
1953				
Jan.	916	12,394	17,321	30,633
Feb.	905	11,604	16,916	29,427
Mar	1,063	12,417	17,861	31,347
Apr.	1,005	12,943	17,098	31,052
May	911	12,268	15,866	29,045
June	793	11,700	15,856	28,349
July	764	11,277	14,323	26,364
Aug.	596	10,565	14,922	26,083
Sept.	616	10,595	15,263	26,474
Oct.	802	11,065	14,785	26,652
Nov.	813	10,022	13,836	24,671
Dec.	786	11,592	14,729	27,107
Ttl.	9,970	136,650	188,776	335,412
1954				
Jan.	731	10,937	13,027	24,695
Feb.	684	11,709	15,050	27,443
Mar.	785	12,835	15,889	29,539
Apr.	752	11,786	14,306	26,844
May	738	10,993	13,610	25,341

* Includes Alaskan output in some months.

Mine Production of Gold in United States

(U. S. Bureau of Mines)

(In fine ounces)

	Eastern States	Western States	Alaska*	Total
1949				
Ttl.	2,008	1,726,089	220,903	1,949,000
1950				
Ttl.	2,061	2,108,756	282,866	2,391,683
1951				
Ttl.	2,511	1,749,580	205,452	1,957,543
1952				
Ttl.	1,948	1,650,660	233,428	1,886,036
1953				
May	76	147,689	18,814	166,579
June	85	136,169	31,144	167,398
July	127	143,296	42,650	186,073
Aug.	97	140,680	39,174	179,951
Sept.	129	147,256	48,544	195,929
Oct.	120	147,753	41,224	189,097
Nov.	144	139,473	30,591	170,208
Dec.	114	137,129	20,000	157,243
Ttl	1,529	1,689,668	273,479	1,964,676
1954				
Jan.	105	137,310	1,585	139,000
Feb.	126	130,410	1,212	131,748
Mar.	158	141,266	7,893	149,317
Apr.	69	133,780	3,538	137,387

* Alaska totals based on mint and smelter receipts.

Mine Production of Recoverable Silver in United States

(U. S. Bureau of Mines)

(In Fine Ounces)

	Eastern States	Missouri	Western States	Alaska*	Total
1951 Total	121,485	237,213	39,073,645	27,760	39,463,661
1952 Total	158,004	391,707	38,515,679	31,825	**39,100,923
1953					
April	14,592	32,720	3,094,803	537	3,142,652
May	9,302	31,657	3,055,305	2,835	3,099,099
June	8,541	32,368	3,051,483	4,655	3,097,047
July	15,363	32,722	2,951,093	5,817	3,004,995
August	10,184	230	3,006,888	5,134	3,022,436
September	15,987	420	3,042,472	6,441	3,065,320
October	12,546	500	3,124,441	5,531	3,143,018
November	18,126	400	2,931,892	4,236	2,954,654
December	10,112	354	3,021,387	3,000	3,034,853
Total	158,707	223,500	36,354,685	39,111	36,776,003
1954					
January	11,662	25,220	2,906,976	256	2,944,074
February	9,333	20,327	2,981,326	178	3,011,603
March	15,643	21,825	3,314,479	1,078	3,353,025
April	11,103	19,793	3,221,604	547	3,253,049

*Alaska totals based on mint and smelter receipts.
**Includes a total of 3,708 oz. from Illinois.

U. S. Silver Production*

(A.B.M.S.)

bars, 0.999 fine, and other refined forms)
(In thousands of ounces: commercial

	Dom.†	For.	Total
1949 Total	34,559	28,226	62,785
1950 Total	42,068	37,656	79,724
1951 Total	39,967	33,837	73,804
1952			
December	3,093	2,843	5,936
Total	40,245	36,653	76,898
1953			
January	3,362	3,400	6,762
February	3,112	2,640	5,752
March	3,175	3,471	6,646
April	3,018	3,193	6,211
May	2,823	3,095	5,918
June	1,909	2,536	4,445
July	2,525	2,533	5,058
August	2,652	4,334	6,986
September	2,301	2,613	4,914
October	3,558	3,431	6,989
November	2,551	4,707	7,218
December	3,751	1,811	5,562
Total	34,697	37,764	72,461
1954			
January	3,372	2,674	6,046
February	3,163	3,729	6,957
March	3,775	3,729	7,504
April	3,643	3,708	7,351
May	3,229	3,335	6,564

* The separation between silver of foreign and domestic origin on the basis of refined bars and other refined forms is only approximate.
† Includes purchases of crude silver by the U. S. Mint.

Production of Primary Aluminum in the U. S.*

(U. S. Bureau of Mines)

(In short tons)

	1947	1948	1949	1950	1951	1952	1953	1954
Jan.	50,045	48,767	54,356	50,023	67,954	76,934	89,895	116,247
Feb.	47,002	45,699	49,749	54,493	62,740	72,374	92,649	110,483
Mar.	43,032	51,874	54,852	58,747	70,022	77,069	104,460	122,339
Apr.	51,007	53,277	54,076	58,024	67,701	76,880	102,071	120,434
May	51,116	55,450	56,909	51,929	67,720	80,803	105,464	.....
June	46,259	48,557	54,184	60,400	67,454	77,476	104,152	.....
July	47,998	52,937	55,777	63,518	72,698	78,368	109,285	.....
Aug.	47,054	54,953	52,001	63,006	73,816	85,175	110,545	.....
Sept.	43,228	53,255	49,742	54,449	69,429	76,882	109,333	.....
Oct.	43,959	54,526	45,790	62,915	72,647	77,312	108,219	.....
Nov.	43,461	50,174	35,865	62,276	72,246	74,639	105,636	.....
Dec.	47,589	53,474	34,161	65,897	72,454	83,419	110,291	.....
Total	571,750	623,456	603,462	718,622	836,881	937,330	1,252,000	.....

*Based on producers' reports to War Production Board to July, 1946. Thereafter to Bureau of Mines. The monthly figures are preliminary in nature and will not add to the totals derived from the Bureau's annual industry canvass.

Average Silver Prices

(Cents per fine ounce)

	1951	1952	1953	1954
Jan.	88.71	88.00	84.44	85.25
Feb.	90.16	88.00	85.25	85.25
Mar.	90.16	88.00	85.25	85.25
Apr.	90.16	88.00	85.25	85.25
May	90.16	85.405	85.25	85.25
June	88.553	82.75	85.25	85.25
July	90.16	82.886	85.25	....
Aug.	90.16	83.25	85.25	....
Sept.	90.16	83.25	85.25	....
Oct.	88.14	83.25	85.25	....
Nov.	88.00	83.25	85.25	....
Dec.	88.00	83.25	85.25	....
Av.	89.377	84.94	85.183	....

Note — The averages are based on the price of refined bullion imported on or after August 31, 1942.

U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr.
Ore, conc., etc. (cont.)	696	245	81
Refined ingots, bars, etc.†	15,199	12,358	20,142
Canada	...	25	1
Argentina	...	...	876
Brazil	2,551	1,153	3,466
Austria	71	...	298
Belgium	...	...	280
Denmark	...	...	213
France	1,610	1,247	2,495
Germany (W.)	1,458	1,751	2,282
Italy	1,125	2,519	2,272
Netherlands	2,309	1,904	1,602
Norway	504	...	565
Sweden	736	...	336
Switzerland	1,300	560	1,339
U. Kingdom	1,240	392	3,077
India	644	1,595	561
Japan	1,649	1,036	436
Australia	...	112	...
Other countries	2	64	43
Total Exports:			
Crude & refined	15,895	12,603	20,223
Pipes and tubes	55	26	103
Plates & sheets	19	20	14
Rods	62	54	10
Wire, bare	336	295	744
Building wire and cable‡	225	131	347
Weatherproof wire‡	77	38	44
Insulated copper wire, n.e.s.‡	551	686	1,725

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

‡ Gross weight; n.e.s. — not elsewhere specified.

U. S. Zinc Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr
Slabs, blocks, etc.	4,522	5,375	731
Canada	...	2	...
Mexico	...	72	...
Brazil	636	317	246
Chile	...	143	...
Belgium	616	...	...
Germany, W.	336	392	224
Netherlands	112	...	112
Switzerland	168	...	...
U. Kingdom	2,632	4,284	...
Korea	22	165	10
Other countries	...	...	*139
Total Exports:			
Ore, conc., slab, blocks	4,522	5,375	731
Scrap: ashes, dross & skimmings	1,597	879	768
Rolled in sheets, plates & strips†	237	269	417
Alloys ex brass & bronze	89	2	24
Die castings	57	65	48

† Includes photoengraving sheets and plates.

* Of which, 112 tons to India.

U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Mar.	Apr.	May
Ore, matte & regulus (cont.)	8,849	10,137	10,591
Canada	2,160	2,267	1,709
Mexico	1,431	1,224	1,020
Cuba	1,316	19	2,615
Bolivia	500	96	303
Chile	1,691	...	1,147
Peru	978	786	951
Philippines	39	4,943	1,835
U. of S. Africa	716	705	635
Australia	...	64	339
Other countries	18	33	37
Blister copper (content)	14,160†	21,568	21,085
Canada	...	...	1,507
Mexico	3,323†	1,877	2,169
Chile	9,679	8,152	8,591
N. Rhodesia	...	10,445	4,223
U. of S. Africa	...	1,094	1,664
Turkey	...	...	548
Australia	1,158	...	1,281
Belg. Congo	...	...	1,102
Refined cathodes and shapes	11,253	14,174	19,856
Canada	2,400	4,065	2,534
Mexico	...	...	1,212
Chile	5,779	5,709	14,051
Peru	...	999	737
Belgium	150	...	19
Norway	497	695	500
Yugoslavia	100	606	303
Belg. Congo	2,327	2,100	500
Total Imports:			
Crude & refined	34,262†	45,879	51,532
In rolls, sheets or rods	325	551	435
Old and scrap (content)	280	507	394
Brass scrap & old (cu. cont.)	239	316	199

† Revised.

U. S. Lead Exports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr.
Lead ore, concentrates, matte & base bullion (content)	...	2	84
Canada	...	2	...
Japan	...	...	84
Pigs and bars	49	41	56
Canada	1	...	...
Cuba	3	...	5
Brazil	...	30	4
Chile	...	...	3
Colombia	...	...	3
Venezuela	...	...	3
Philippines	23	...	...
Guatemala	...	5	28
Other countries	22	6	10
Total Exports:			
Ore, base bullion, refined	49	43	140
Sheets & pipes	31	8	42
Typemetal	11	11	72
Antimonial	23	3	7
Scrap	330	816	255

Comparative Metal Prices

	1939	OPA Nov.	July 1954
Copper, Domestic (Electro, Del. Valley)	11.20	14.375	30.00
Lead (N. Y.)	5.05	8.25	14.00
P. W. Zinc (E. St. Louis, f. o. b.)	5.05	9.25	11.00
New York, del.	...	...	11.50
Tin, Spot—Straits, N. Y.	...	...	96.50
Aluminum Ingot 99%+	20.00	15.00	21.50
Antimony (R.M.M. brand, f. o. b. Laredo)	12.36	14.50	28.50

U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Mar.	Apr.	May
Ore, matte, etc. (content)	13,104	11,821	13,165
Canada	4,254	2,472	2,850
Mexico	220	173	102
Guatemala	198	156	189
Honduras	46	244	86
Bolivia	2,020	775	680
Peru	1,832	3,429	3,834
Greece	436	...	...
U. of S. Africa	3,866	3,078	3,392
Philippines	232	208	147
Australia	...	1,194	1,881
Other countries	...	92	4
Base bullion (content)	8	...	...
Peru	8	...	...
Pigs and bars	21,149†	28,496	29,030
Canada	5,493	5,607	5,470
Mexico	6,417†	9,016	8,252
Peru	882	1,510	2,456
Belgium	...	55	83
Denmark	312	525	473
Spain	...	551	386
U. Kingdom	...	23	...
Yugoslavia	5,172	...	3,767
Fr. Morocco	2,313	4,187	2,207
Australia	560	7,003	5,936
Other countries	...	19	...
Total Imports:			
Ore, base bullion, refined	34,261†	40,317	42,195
Lead scrap, dross, etc. (cont.)	124	163	153
Antimonial lead & typemetal	128	227	695
Lead content thereof	103	157	535

† Revised.

U. S. Zinc Imports

(A.B.M.S.) (Bureau of the Census)

(In tons of 2,000 lbs.)

	1954		
	Mar.	Apr.	May
Zinc ore (content)	42,362	31,218	32,037
Canada	11,869	11,116	11,358
Mexico	14,661	14,372	12,431
Guatemala	...	...	49
Bolivia	3,494	688	71
Colombia	...	7	...
Chile	...	...	444
Peru	8,218	4,115	6,857
Yugoslavia	2,558	...	...
U. of S. Africa	455	400	438
Australia	...	371	280
Philippines	54	31	29
Honduras	38	118	80
Other countries	15	...	...
Zinc blocks, pigs, etc.	15,108	14,397	10,139
Canada	12,813	8,862	8,122
Mexico	100	105	...
Peru	1,048	900	709
Belgium	...	...	169
Germany (W.)	...	1,323	...
Italy	375	534	55
Netherlands	...	882	...
Belg. Congo	772	1,791	524
Australia	...	...	560
Total Imports:			
Zinc ore, blocks, pigs	57,470	45,615	42,176
Dross and skim.	*60	...	45
Old and worn out	...	170	...

World Production of Copper

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (refined)	Mexico (crude)	Chile (b)	Peru (refined)	Fed. Rep. of Germany (d)	Japan (refined)	Australia (crude)	Union of S. Africa (c)	Rhodesia	Total
1950											
Total	940,249	240,103	61,819	381,432	22,712	214,832	93,408	17,917	36,558	314,589	2,318,320
1951											
Total	964,589	245,122	60,576	396,998	25,495	234,647	100,254	17,330	36,092	349,667	2,455,159
1952											
Total	961,886	197,356	60,874	422,493	22,640	206,747	104,060	21,119	37,459	336,883	4,160,664
1953											
July	79,938	19,997	5,621	29,502	2,359	20,914	7,444	3,711	3,980	34,775	208,241
Aug.	79,376	19,844	5,352	29,652	2,513	18,836	8,681	3,450	3,309	32,207	203,220
Sept.	78,952	16,759	4,974	29,417	2,121	19,654	9,600	3,920	3,506	28,579	197,482
Oct.	83,433	17,650	5,888	20,340	2,140	20,865	9,849	3,479	3,166	35,382	202,192
Nov.	79,934	17,080	5,486	9,669	2,268	20,466	9,581	3,240	2,572	34,262	184,558
Dec.	78,500	18,703	5,075	29,435	2,303	21,429	10,346	3,784	4,041	31,151	204,767
Total	957,318	235,710	63,380	365,734	25,422	233,341	100,381	39,339	38,622	381,031	4,337,556
1954											
Jan.	76,912	14,968	5,543	29,759	1,910	20,687	10,211	1,758	3,816	29,856	193,662
Feb.	68,034	13,955	5,146	.....	1,465	19,359	10,052	....	3,513	25,947	.....
Mar.	73,429	21,075	4,646	.....	1,599	21,264	11,240	....	2,544	38,021	.....
Apr.	70,977	20,379	4,380	.....	2,412	22,494	.....	....	....	36,250	.....
May	71,459	22,969	4,059	.....	2,620	.....	.....	....	....	32,154	.....

(a) Blister or converter copper reported by Copper Institute as "min' production or smelter production or shipment and custom intake." Does not include production from scrap nor from smelting or imported ore except that received from Cuba and the Philippines. (b) Reported as bar copper (includes blister, electrolytic and fire-refined). (c) Blister and fire-refined. (d) Refined coopper, both electroolytic and fire-refined includes scrap.

World Production of Refined Lead

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States	Canada	Mexico	Argentina	Peru	Belgium	France	Fed. Rep. of Germany	Italy	Spain	Japan	Australia (a)	Tunis	Rhodesia	Total
1950															
Total	571,763	170,023	270,951	20,120	34,948	68,446	68,779	136,752	42,780	38,443	17,677	215,228	25,945	15,372	1,713,216
1951															
Total	486,874	162,001	219,352	N.A.	49,044	76,854	53,830	170,766	39,683	45,460	18,515	217,301	25,478	15,646	1,602,601
1952															
Total	532,778	183,389	248,551		53,536	83,139	59,607	152,751	38,504	46,060	20,530	217,293	28,264	14,112	1,709,738
1953															
July	40,210	9,660	18,002	N.A.	5,367	6,206	3,352	13,588	2,259	3,708	2,263	22,958	2,459	1,120	139,763
Aug.	38,022	11,615	19,801	N.A.	5,428	6,164	3,866	12,265	2,359	4,266	2,155	22,312	2,889	1,120	132,262
Sept.	42,154	12,382	18,394	N.A.	5,865	6,424	6,529	12,880	3,197	4,015	2,353	24,817	2,501	1,120	142,631
Oct.	44,741	12,646	19,907	N.A.	5,935	6,157	6,208	14,610	5,072	5,635	2,071	23,754	2,666	1,120	160,445
Nov.	52,562	14,876	17,847	N.A.	5,302	6,048	5,637	15,165	4,608	3,702	1,842	20,095	1,963	1,120	151,367
Dec.	48,687	14,913	19,262	N.A.	5,634	6,900	6,584	15,674	3,635	4,406	2,467	26,464	2,643	1,120	158,389
Total	533,883	165,752	225,075	N.A.	65,228	80,798	60,886	164,076	40,787	53,788	25,513	241,419	30,393	12,891	1,808,496
1954															
Jan.	48,518	13,085	17,374	N.A.	5,292	6,719	6,501	15,207	2,221	4,019	2,820	25,901	2,716	1,120	188,550
Feb.	42,046	12,326	16,052	N.A.	3,620	6,792	6,078	12,996	3,368	4,888	2,874	19,085	2,486	1,002	170,123
Mar	50,808	14,243	22,638	N.A.	5,303	6,416	5,767	14,445	3,963	6,033	3,276	17,244	2,917	1,400	.....
Apr.	46,730	.....	20,819	N.A.	5,609	6,064	7,666	13,120	3,255	4,637	....	.....	....	1,848	.....
May	49,319	.....	20,723	N.A.	4,847	....	....	.....	....	.....	....	....	....	1,120	.....

(a) Production credited to Australia includes lead refined in England from Australian base bullion. N.A.—Not available.

World Production of Slab Zinc

(American Bureau of Metal Statistics)

(In Tons of 2,000 Pounds)

	United States (a)	Canada (b) (c)	Mexico	Belgium	France (a)	Fed. Rep. of Germany	Great Britain	Italy	Netherlands	Norway	Spain	Japan (a)	Australia (b)	Rhodesia (b)	Total (d)
1950															
Total	910,363	204,453	54,089	195,466	78,849	135,353	78,725	41,929	21,342	47,788	23,406	54,021	94,595	25,542	1,965,526
1951															
Total	931,833	218,548	57,990	220,479	82,184	155,024	78,101	52,058	24,924	44,971	23,444	62,109	88,103	25,301	2,065,216
1952															
Total	961,430	223,140	61,456	205,909	88,255	162,272	76,981	60,438	28,555	43,061	23,329	77,203	97,931	25,637	2,141,088
1953															
July	80,825	21,595	5,071	16,824	7,447	13,414	6,198	6,356	2,179	1,898	1,985	7,833	8,195	2,464	184,241
Aug.	83,241	21,703	5,096	16,135	5,295	13,783	5,947	6,444	2,235	3,784	1,889	7,803	8,292	2,520	184,167
Sept.	81,211	21,157	4,975	16,248	6,497	13,821	7,355	5,941	2,178	4,506	1,965	7,417	8,164	2,464	183,899
Oct.	84,031	21,880	5,077	16,584	7,275	14,484	5,808	5,784	2,305	4,469	2,256	7,528	9,545	2,436	191,766
Nov.	75,891	21,051	4,931	17,183	7,460	14,392	8,211	5,446	2,276	2,916	2,259	6,943	9,471	2,576	181,006
Dec.	79,116	21,899	5,170	18,218	9,424	15,098	7,623	5,035	2,286	2,852	2,324	8,176	9,841	2,668	192,215
Total	971,191	247,710	59,589	212,001	89,218	163,430	81,436	65,661	27,711	42,566	25,276	86,833	101,000	28,369	2,227,849
1954															
Jan.	78,561	17,156	5,151	19,032	10,081	15,453	7,144	5,358	1,958	3,670	2,261	8,383	9,482	2,520	188,550
Feb.	68,020	15,199	4,710	18,963	8,988	13,872	6,676	4,674	2,114	3,629	1,938	7,711	8,961	2,380	170,123
Mar.	71,168	16,550	5,258	19,213	10,642	15,420	9,119	5,503	2,474	4,522	2,137	9,588	10,012	2,520	.....
Apr.	70,258	16,250	4,798	.....	10,413	15,066	6,808	5,832	....	4,102	1,921	....	9,736	2,520	.....
May	73,654	16,530	5,090	.....	.....	....	7,253	....	....	4,153	....	....	....	2,576	.....

(a) Partially electrolytic. (b) Entirely electrolytic. (c) Includes production from foreign oore. (d) The above totals oomit production in Russia, Czechoslovakia (in any), Poland, Yugoslavia and South America.

U. K. Virgin Copper Stocks

British Bureau of Non-Ferrous Metal Statistics

(In long tons)

At start of:	1952	1953	1954
Jan.	113,359	131,968	55,344
Feb.	106,890	135,221	60,402
Mar.	103,123	146,911	60,084
Apr.	103,521	149,177	47,258
May	107,906	165,385	60,118
June	114,119	182,500	.....
July	106,809	185,946	.....
Aug.	107,619	198,609	.....
Sept.	121,152	27,422	.....
Oct.	121,649	31,850	.....
Nov.	119,052	36,824	.....
Dec.	126,394	50,407	.....

U. K. Refined Lead Stocks

British Bureau of Non-Ferrous Metal Statistics

(In long tons)

At start of:	1952	1953	1954
Jan.	77,167	23,090	26,887
Feb.	89,831	27,486	32,653
Mar.	104,206	16,518	30,697
Apr.	110,598	13,781	28,312
May	116,249	17,144	30,005
June	120,261	29,007	.....
July	121,576	26,868	.....
Aug.	116,283	25,820	.....
Sept.	116,480	28,290	.....
Oct.	109,323	22,886	.....
Nov.	107,160	29,279	.....
Dec.	88,514	29,174	.....

U. K. Stocks of Zinc

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 lbs.)

	Virgin Zinc		Zinc. Conc.	
At start of:	1953	1954	1953	1954
Jan.	166,050	27,652	52,422	45,731
Feb.	16,545	.....	61,346	42,581
Mar.	20,401	.....	64,625	33,912
Apr.	23,783	.....	56,489	26,076
May	30,821	.....	58,815	32,517
June	34,078	.....	56,514	.....
July	31,661	.....	55,218	.....
Aug.	34,609	.....	54,467	.....
Sept.	33,348	.....	55,702	.....
Oct.	27,981	.....	49,636	.....
Nov.	24,731	.....	46,173	.....
Dec.	22,462	.....	45,094	.....

U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1954		
	Mar.	Apr.	May
(Gross Weight)			
Copper and copper alloys	29,170	33,514	35,276
Copper unwrought:			
Electrolytic	19,617	22,411	18,626
Other refined	550	829	3,371
Blister or rough	8,964	10,264	13,229
Rods, sections, etc., and wire of brass and other alloys of copper	2	5	3
Other	37	5	47
U. of S. Africa	1,653	400	30
N. Rhodesia	18,672	20,833	19,802
Canada	5,523	6,242	5,749
Belgium	1,000	1,671	1,250
Germany (W.)	804	1,764	881
United States	957	1,097	3,389
Chile	...	500	4,050
Other countries	561	1,007	125
Total	29,170	33,514	35,276

Copper Consumption in United Kingdom

British Bureau of Non-Ferrous Metal Statistics

(In tons of 2,240 pounds)

	Unalloyed	Brass, etc	Sulphate	Total	Virgin	Scrap
1949 Total	305,614	180,227	10,879	496,720	318,736	177,984
1950 Total	303,833	204,427	13,738	521,998	333,700	188,298
1951 Total	300,665	243,152	11,041	554,853	330,361	224,487
1952 Total	313,374	243,836	14,629	571,839	347,646	224,193
1953						
March	21,221	16,920	1,218	39,359	20,517	18,842
April	19,226	14,393	1,140	34,759	16,108	18,651
May	17,727	13,951	1,211	32,889	14,779	18,100
June	16,483	14,856	1,027	32,366	15,416	16,950
July	16,187	13,788	898	30,873	14,698	16,175
August	16,097	11,109	463	27,669	22,973	4,696
September	20,947	17,765	737	39,449	29,437	10,012
October	23,618	19,323	801	43,742	32,615	11,127
November	22,285	19,148	784	42,217	31,118	11,099
December	22,952	18,502	779	42,233	32,570	9,663
Total	242,460	192,337	11,206	446,003	321,054	124,949
1954						
January	23,421	18,520	961	42,902	35,344	7,558
February	22,304	19,322	1,041	42,667	31,951	10,716
March	26,049	21,361	1,197	48,607	37,382	11,225
April	22,828	18,542	1,110	42,480	30,196	12,284

U. K. Zinc Imports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1954		
	Mar.	Apr.	May
(Gross Weight)			
Zinc ore and conc.	13,048	17,794	14,216
Australia	8,436	14,893	5,126
Other countries	4,612	2,901	9,090
Zinc conc.†	2,253	13,907	...
Australia	309	11,706	...
Burma	1,944	2,201	...
Zinc and zinc alloys	15,260	15,008	13,327
Zinc or spelter, unwrought, in ingots, blocks, bars, slabs and cakes	15,197	14,968	13,277
Other	63	40	50
N. Rhodesia	722	1,019	906
Australia	1,501	1,500	800
Canada	3,796	3,616	6,237
Belgium	2,155	2,675	2,799
Germany (W.)	1	...	...
Netherlands	250	45	631
Norway	532	300	300
United States	5,601	4,678	1,302
Other countries	702	1,175	352
Total	15,260	15,008	13,327

† British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weights as officially reported for any comparable period.

Zinc Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in slabs, blocks, etc., metric tons except where otherwise noted.

	1954		
IMPORTS	Feb.	Mar.	Apr.
U. S. (s.t.)	8,463	15,108	14,397
Canada (s.t.)	3	1	...
Belgium	915	356	..
Denmark	432	611	793
France	1,613	2,242	604
Germany‡	2,374	5,647	...
Italy	30	...	...
Netherlands	1,656	1,572	...
Sweden	822	983	2,311
Switzerland‡	726	1,674	1,865
U. K. (l.t.)	14,556	15,260	15,008
India (l.t.)	1,350	2,527	2,532
EXPORTS			
U. S. (s.t.)	4,522	5,375	731
Canada (s.t.)	11,328	18,199	17,926
Belgium	5,563	13,027	...
Denmark	96	49	35
France	86	112	106
Germany‡	651	2,543	...
Italy	1,459	...	...
Netherlands	904	2,020	...
Norway	1,014	2,443	...
Switzerland‡	152	377	599
U. K. (l.t.)*	409	347	320
Northern Rhodesia (l.t.)	2,354	2,716	2,239
Australia (l.t.)	2,585	...	...
Belg. Congo	(4,432†)		...

* Includes manufactures.
† February–March.
‡ Includes scrap.

United Kingdom Tin Statistics

(British Bureau of Non-Ferrous Metal Statistics)

	TIN CONTENT OF TIN IN ORE				TIN METAL				
	Imports	Production*	Consumption**	Stock at end of period*	Imports	Production*	Consumption	Exports & Re-exports	Stock at end of period
1952									
Year	28,836	954	29,350	2,364	2,885	29,521	22,555	21,721	4,225
1953									
May	3,598	95	2,450	4,351	86	2,410	1,351	1,152	3,645
June	2,440	136	3,100	3,651	10	2,895	1,519	1,332	3,511
July	2,891	85	3,300	3,328	22	3,289	1,328	1,730	3,749
August	2,945	44	2,650	3,782	20	2,611	1,177	2,195	3,511
September	2,720	98	3,100	3,388	7	2,893	1,820	2,195	3,269
October	2,151	99	2,850	2,769	35	2,667	1,680	1,379	3,157
November	1,812	80	2,550	2,228	50	2,521	1,541	926	3,031
December	2,639	83	2,350	2,450	25	2,249	1,768	823	3,085
Year	28,902	1,103	29,900	2,450	1,038	28,860	18,634	14,450	3,085
1954									
January	1,738	75	2,800	1,444	10	2,718	1,663	652	3,530

*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks. **Own estimates.

Canada's Copper Output

(Dominion Bureau of Statistics)

(Refined Copper)
(In Tons)

	1951	1952	1953	1954
Jan.	20,870	20,364	21,830	15,001
Feb.	18,342	18,901	21,075	13,954
Mar.	20,564	20,480	22,432	21,075
Apr.	20,347	20,363	21,747	20,412
May	22,731	20,548	20,179	.....
June	21,315	20,274	18,384	.....
July	20,142	14,196	19,996	.....
Aug.	21,740	9,396	19,886	.....
Sept.	18,624	10,323	16,777	.....
Oct.	21,260	12,761	17,675	.....
Nov.	19,195	11,282	17,101	.....
Dec.	20,336	17,432	18,703	.....
Year	245,466	196,320	235,787	.....

Canada's Lead Exports

(Dominion Bureau of Statistics)

(In Pigs)
(In Tons)

	1951	1952	1953	1954
Jan.	10,081	8,136	11,212	6,170
Feb.	6,527	9,702	8,710	7,560
Mar.	10,873	10,851	14,943	11,092
Apr.	8,537	10,450	14,765	9,606
May	14,813	11,020	7,039	....
June	5,756	10,466	13,434	....
July	5,795	10,249	1,537	....
Aug.	4,894	10,642	8,869	....
Sept.	6,944	14,121	3,903	....
Oct.	8,660	13,193	7,532	....
Nov.	12,929	12,703	6,581	....
Dec.	9,927	8,208	4,354	....
Year	105,736	129,741	102,879	.....

Canada's Silver Exports

(Dominion Bureau of Statistics)

(In ores and concentrates)
(Fine Ounces)

	1952	1953	1954
Jan.	172,826	522,073	547,951
Feb.	144,635	218,421	567,225
Mar.	154,163	263,650	849,502
Apr.	280,130	311,141	572,059
May	222,133	419,569	.....
June	273,447	323,913	.....
July	380,190	614,320	.....
Aug.	277,597	533,155	.....
Sept.	209,566	527,771	.....
Oct.	928,483	1,015,012	.....
Nov.	353,841	463,667	.....
Dec.	149,437	473,826	.....
Year	3,546,448	5,686,518	.....

Canada's Copper Exports

(Dominion Bureau of Statistics)

(Ingots, bars, slabs and billets)
(In Tons)

	1951	1952	1953	1954
Jan.	8,081	9,237	7,668	9,081
Feb.	6,600	4,947	16,411	8,385
Mar.	7,388	11,104	10,578	11,671
Apr.	12,336	10,948	11,153	11,218
May	6,940	11,355	14,726	.....
June	8,115	8,178	15,053	.....
July	9,160	7,815	13,939	.....
Aug.	6,503	13,739	7,272	.....
Sept.	8,010	10,908	8,139	.....
Oct.	6,968	11,040	8,957	.....
Nov.	3,387	10,004	9,062	.....
Dec.	13,343	4,500	9,036	.....
Year	101,831	113,675	131,994	.....

Canada's Zinc Output

(Dominion Bureau of Statistics)

(Refined Zinc)
(In Tons)

	1951	1952	1953	1954
Jan.	18,244	19,242	18,370	17,155
Feb.	16,710	17,411	18,677	15,199
Mar.	18,138	18,953	20,693	16,550
Apr.	17,484	19,415	20,003	16,249
May	18,116	18,786	20,090	.....
June	18,222	18,728	20,589	.....
July	18,232	19,411	21,595	.....
Aug.	18,352	18,924	21,703	.....
Sept.	17,956	18,230	21,157	.....
Oct.	17,786	19,754	21,888	.....
Nov.	18,683	16,114	21,051	.....
Dec.	20,271	18,232	21,899	.....
Year	219,194	222,200	247,707	.....

Canada's Silver Output

(Dominion Bureau of Statistics)

(In Ounces)

	1952	1953	1954
Jan.	1,803,848	2,459,531	2,552,947
Feb.	2,022,126	2,255,113	2,004,696
Mar.	2,085,986	2,458,022	2,280,391
Apr.	2,521,864	3,076,852	2,660,717
May	2,274,279	2,520,180	.....
June	1,907,137	2,538,663	.....
July	1,831,089	2,353,542	.....
Aug.	2,214,798	2,029,346	.....
Sept.	1,817,435	2,067,294	.....
Oct.	1,857,118	2,097,630	.....
Nov.	2,421,617	2,143,069	.....
Dec.	2,464,930	2,244,413	.....
Year	25,222,227	28,243,655	.....

Canada's Lead Output

(Dominion Bureau of Statistics)

(Recoverable Lead)*
(In Tons)

	1951	1952	1953	1954
Jan.	16,099	15,271	19,502	17,716
Feb.	12,001	11,072	16,888	16,854
Mar.	12,632	15,522	14,185	16,884
Apr.	10,063	14,547	18,640	19,148
May	11,126	13,770	16,120	.....
June	13,811	11,172	15,302	.....
July	11,017	11,460	11,969	.....
Aug.	13,797	13,605	13,864	.....
Sept.	11,899	14,488	14,335	.....
Oct.	15,052	16,641	16,327	.....
Nov.	14,785	12,884	19,416	.....
Dec.	15,562	18,406	19,245	.....
Year	158,231	168,842	195,791	.....

* New base bullion from Canadian ores plus recoverable lead in ores or concentrates shipped for export.

Canada's Zinc Exports

(Dominion Bureau of Statistics)

(Slabs in Tons)

	1951	1952	1953	1954
Jan.	13,277	9,209	17,478	16,625
Feb.	4,602	17,639	13,580	11,328
Mar.	12,185	21,839	18,307	18,199
Apr.	14,014	18,205	17,068	17,926
May	13,776	12,514	15,595	.....
June	14,337	14,393	14,919	.....
July	13,597	12,800	10,068	.....
Aug.	11,669	10,040	8,594	.....
Sept.	10,435	12,594	9,423	.....
Oct.	16,370	11,454	11,862	.....
Nov.	12,371	14,135	10,685	.....
Dec.	12,500	12,042	10,809	.....
Year	146,133	166,864	158,388	.....

Canada's Nickel Output

(Dominion Bureau of Statistics)

(In Tons)

	1951	1952	1953	1954
Jan.	10,993	11,813	12,446	12,670
Feb.	9,702	10,719	10,612	11,795
Mar.	11,676	12,381	12,218	13,502
Apr.	10,603	12,318	11,791	12,931
May	12,528	12,413	11,560	.....
June	11,889	12,563	11,647	.....
July	11,828	10,426	11,751	.....
Aug.	12,304	11,975	11,681	.....
Sept.	11,682	10,982	11,981	.....
Oct.	11,758	11,773	12,419	.....
Nov.	11,570	11,381	12,714	.....
Dec.	11,370	11,815	11,996	.....
Year	137,903	140,559	143,016	.....

Canadian Copper Exports

(Dominion Bureau of Statistics)
(A.B.M.S.)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr.
Ore, matte, regulus, etc. (content)	3,731	4,022	2,883
United States	2,723	2,968	2,061
Norway	915	931	729
U. Kingdom	93	123	93
Ingots, bars, billets	8,385	11,671	11,218
United States	2,644	3,913	4,555
Brazil	112	413	850
France	441	711	392
W. Germany	...	34	...
U. Kingdom	5,188	6,600	5,421
Total Exports:			
Crude & refined	12,116	15,693	14,101
Old & scrap	506	510	595
Rods, strips, sheet & tubing	70	197	533

Canadian Lead Exports

(Dominion Bureau of Statistics)
(A.B.M.S.)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr.
Ore (lead content)	3,301	3,057	3,464
United States	3,301	3,057	3,464
Refined lead	7,560	11,091	9,606
United States	3,972	6,403	5,727
Brazil	58	193	127
Venezuela	11	...	...
U. Kingdom	3,304	4,032	3,472
Japan	213	463	280
Other countries	2	...	...
Total Exports:			
Ore & refined	10,861	14,148	13,070
Pipe & tubing	5	1	3
Lead scrap	39	...	...

Canadian Zinc Exports

(Dominion Bureau of Statistics)
(A.B.M.S.)

(In tons of 2,000 lbs.)

	1954		
	Feb.	Mar.	Apr.
Ore (zinc content)	7,663	11,838	11,188
United States	7,663	11,838	11,188
Zinc (spelter)	11,328	18,199	17,926
United States	6,534	11,980	9,544
Brazil	152	...	...
U. Kingdom	4,553	6,218	8,290
Korea	89	...	92
Other countries	...	1	...
Total Exports:			
Ore & spelter	18,991	30,037	29,114
Zinc scrap, dross, ashes	82	66	157
United States	...	51	...
Belgium	...	...	117
W. Germany	82	...	14
India	...	15	26

Copper Imports and Exports by Principal Countries

(A.B.M.S.)

Reported in ingots, slabs, etc., metric tons except where otherwise noted.

IMPORTS

	1954		
	Feb.	Mar.	Apr.
U. S. (blist., s.t.)	21,780	14,160†	21,568
(ref., s.t.)	14,461	11,253	14,174
Belgium‡	5,278	23,560	...
Denmark	1,058	16	165
France (crude)	813	922	813
(refined)	8,179	9,237	11,332
Italy	5,312	...	...
Germany	8,546	11,829	...
Netherlands	1,505	2,682	...
Norway	7	185	...
Sweden	7,373	5,734	5,585
Switzerland	1,764	1,905	1,505
U. K. (l.t.)	23,544	29,170	33,514
India (ref., l.t.)	364	600	674

EXPORTS

U. S. (ref., s.t.)	15,199	12,358	20,142
Canada (rf., s.t.)	8,385	11,671	11,218
Belgium‡	7,757	13,433	...
Denmark	259	20	...
Finland*	50	262	50
Germany	3,279	3,685	...
Norway	999	1,085	...
Sweden	1,766	1,053	1,697
U. K. (l.t.)	2,517	2,226	2,146
Belg. Congo**	19,623	18,972	17,896
N. Rhodesia (ref. & blist., l.t.)	32,854	24,400	39,511

† Revised.
‡ Includes copper alloys.
* Includes old.
** Copper wire bars and ingot bars 99% and copper ingots 97%.

French Zinc Imports

(A.B.M.S.)

(In metric tons)

	1954		
	Feb.	Mar.	Apr.
Ore (gross weight)	9,201	31,140	18,271
Canada	...	436	...
Belgium	...	2,762	230
Germany (W.)	194	...	775
Greece	...	900	...
Italy	2,280	1,040	2,149
Norway	...	...	484
Spain	1,490	4,465	3,659
Algeria	3,160	6,260	1,040
Fr. Morocco	2,077	10,583	9,434
Tunisia	...	1,194	500
Belg. Congo	...	3,500	...
Slabs, bars, blocks, etc.	1,613	2,242	604
United States	51	...	...
Mexico	101	203	...
Belgium	849	1,793	544
Germany (W.)	...	25	...
Italy	50	...	50
Norway	350	150	...
U. Kingdom	152	...	...
Yugoslavia	50	...	...
Algeria	...	...	10
Other Br. Africa (East Coast)	10	...	...
U. of S. Africa	...	71	...

U. K. Copper Exports

(British Bureau of Non-Ferrous Metal Statistics)

(In tons of 2,240 lbs.)

	1954		
	Feb.	Mar.	Apr.
(Gross Weight)			
Copper unwrought, ingots, blocks, slabs, bars, etc.	2,517	2,226	2,146
Plates, sheets, rods, etc.	1,775	1,714	2,201
Wire (including uninsulated electric wire)	283	317	297
Tubes	380	444	383
Other copper, worked (incl. pipe fittings)	36	72	23
Total	4,991	4,773	5,050

French Copper Imports

(A.B.M.S.)
(In metric tons)

	1954		
	Mar.	Apr.	May
Crude copper for refining (blister, black and cement)	922	813	813
Belg. Congo	...	813	813
U. of S. Africa	922	...	...
Refined	9,237	11,332	8,416
United States	946	1,980	1,958
Canada	400	645	355
Chile	64	100	...
Peru	178	481	635
Belgium	4,359	2,767	2,888
Germany (W.)	363	57	10
Norway	...	...	27
Sweden	17	...	9
U. Kingdom	618	468	287
Belg. Congo	2,154	4,316	1,551
Fr. Morocco	103	...	...
Other Br. Africa (East Coast)	35	518	668
Other countries	...	...	28
Total Imports			
Crude & refined	10,159	12,145	9,229

French Metal Exports

(A.B.M.S.)

(In metric tons)

	1954		
	Mar.	Apr.	May
Lead:			
Ore (gross weight)	21	17	11
Pig lead:			
Argentiferous	...	3	...
Non-argenti ferous	223	315	4,807
Antimonial lead	23	16	22
Zinc:			
Slabs, bars, blocks, etc.	112	106	120
Copper:			
Crude copper for refining (blister, black and cement)	...	66	...

Nonferrous Castings

MONTHLY SHIPMENTS, BY TYPE OF METAL

(Bureau of Census — Thousands of Pounds)

	Aluminum	Copper	Magnesium	Zinc	Lead Die
1949 Total	304,409	724,053	9,364	377,779	9,101
1950 Total	543,082	1,056,973	15,224	579,332	20,977
1951 Total	515,131	1,197,443	30,825	487,996	25,936
1952					
October*	51,631	93,102	3,250	42,852	2,131
November	46,483	80,439	2,959	36,765	1,923
December	53,343	90,799	3,110	42,148	1,648
Total	518,979	1,009,910	34,857	408,353	20,941
1953					
January	55,921	85,519	3,112	46,119	1,939
February	54,988	85,674	3,274	46,723	1,645
March	59,208	93,183	3,403	51,540	1,912
April	61,461	94,063	3,332	51,301	1,979
May	57,340	84,550	2,705	44,174	1,792
June	56,492	83,947	3,063	48,806	1,777
July	51,196	69,597	2,287	39,968	1,506
August	50,428	77,652	2,490	37,800	1,806
September	53,306	79,595	2,455	38,611	1,743
October	55,097	83,899	3,024	40,882	1,709
November	51,014	74,782	2,681	37,688	1,405
December	51,579	77,675	2,691	38,661	1,231
Total	658,022	990,496	34,517	521,253	20,444
1954					
January	51,446	71,437	2,451	40,396	1,514
February	51,213	68,849	2,194	37,660	1,303
March	56,184	76,480	2,407	42,991	1,335
April	53,006	72,900	2,068	38,968	1,559

*Computed on new basis as of October, 1952.

Copper Castings Shipments

BY TYPE OF CASTING

(Bureau of Census) **(Thousands of Pounds)**

	Total	Sand	Permanent Mold	Die	All Other
1949 Total	724,053	654,444	37,311	8,817	23,481
1950 Total	1,015,679	918,883	52,756	13,224	30,816
1951 Total	1,197,443	1,075,437	69,883	12,516	39,607
1952 Total	1,009,910	910,862	63,865	8,259	26,924
1953					
February	85,674	77,087	5,113	850	2,624
March	93,183	84,022	5,716	902	2,543
April	94,063	85,171	5,463	893	2,536
May	84,550	76,239	4,856	895	2,560
June	83,947	75,625	4,705	872	2,745
July	69,957	63,365	3,927	692	1,973
August	77,652	69,852	4,890	854	2,056
September	79,595	71,184	5,273	840	2,298
October	83,899	74,460	5,775	853	2,811
November	74,782	66,370	5,077	757	2,578
December	77,675	68,821	5,082	818	2,854
Total	990,496	888,369	61,316	10,077	30,734
1954					
January	71,437	63,034	4,618	816	2,969
February	68,849	60,913	4,743	758	2,435
March	76,480	67,952	5,123	875	2,530
April	72,900	65,418	4,732	377	2,373

*Computed on new basis as of October, 1952.

Nickel Averages

Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included

(cents per pound)

	1951	1952	1953	1954
Jan.	50.50	56.50	58.62	60.00
Feb.	50.50	56.50	60.00	60.00
Mar.	50.50	56.50	60.00	60.00
Apr.	50.50	56.50	60.00	60.00
May	50.50	56.50	60.00	60.00
June	56.27	56.50	60.00	60.00
July	56.50	56.50	60.00	....
Aug.	56.50	56.50	60.00	....
Sept.	56.50	56.50	60.00	....
Oct.	56.50	56.50	60.00	....
Nov.	56.50	56.50	60.00	....
Dec.	56.50	56.50	60.00	....
Av.	53.98	56.50	59.885	....

Platinum Averages

N. Y. MONTHLY QUOTATIONS

(Dollars per Troy Ounce)

	1951	1952	1953	1954
Jan.	91.50	91.50	91.50	91.40
Feb.	91.50	91.50	91.50	91.00
Mar.	91.50	91.50	91.50	87.88
Apr.	91.50	91.50	91.50	85.50
May	91.50	91.50	91.50	85.50
June	91.50	91.50	92.81	85.50
July	91.50	91.50	94.00	....
Aug.	91.50	91.50	94.00	....
Sept.	91.50	91.50	92.50	....
Oct.	91.50	91.50	92.50	....
Nov.	91.50	91.50	92.50	....
Dec.	91.50	91.50	92.15	....
Av.	91.50	91.50	92.496	....

Prompt Tin Prices

(Straits, Open Market, N. Y.)

Monthly Average Prices

(cents per pound)

	1951	1952	1953	1954
Jan.	171.74	109.727†	121.50	84.84
Feb.	182.68	121.50†	121.50	85.04
Mar.	146.035†	121.50†	121.415	91.24
Apr.	145.95†	121.50†	101.07	96.238
May	139.954†	121.50†	97.387	93.51
June	118.048†	121.50†	92.933	94.24
July	106.00†	121.50†	81.826	....
Aug.	103.00†	121.50†	80.69	....
Sept.	103.00†	121.375	82.275	....
Oct.	103.00†	121.228	80.897	....
Nov.	103.00†	121.25	83.26	....
Dec.	103.00†	121.465	84.693	....
Av.	127.12	(A)	95.787	....

†RFC Prompt Grade A from March 13, 1951.

(A) RFC 1952 average price, 120.519c. Average Open Market Price, last four months of 1952, 121.344c.

Monthly Tin Production at Longhorn Smelter

(From Concentrates)

(In tons of 2,240 pounds)

	1951	1952	1953	1954
Jan.	3,211	1,802	4,000	2,700
Feb.	3,096	1,800	3,400	3,008
Mar.	3,036	1,800	3,850	3,559
Apr.	3,058	1,800	3,750	3,006
May	3,059	1,800	3,100	2,054
June	2,655	NIL	3,000	1,205
July	2,406	NIL	3,000	....
Aug.	2,543	NIL	2,600	....
Sept.	2,155	2,450	2,700	....
Oct.	2,091	3,364	2,751	....
Nov.	1,806	4,020	2,750	....
Dec.	1,805	3,705	2,750	....
Total	30,921	22,541	37,651	....

Quicksilver Averages

N. Y. Monthly Averages

Virgin, Dollars per 76-lb. Flask

	1951	1952	1953	1954
Jan.	199.18	209.19	214.88	189.60
Feb.	218.05	201.74	207.37	190.00
Mar.	216.92	207.74	199.92	201.63
Apr.	217.14	205.08	197.90	221.36
May	214.462	200.81	196.50	251.20
June	211.00	196.38	193.42	273.46
July	207.46	192.154	192.21	.....
Aug.	199.24	188.115	190.42	.....
Sept.	208.65	190.76	187.04	.....
Oct.	220.02	194.00	184.62	.....
Nov.	217.87	202.64	186.00	.....
Dec.	214.92	215.30	188.38	.....
Av.	212.08	200.50	194.89	.....

Primary Aluminum Output, Shipments and Stocks

(U. S. Department of Interior)

	Stocks beginning of month short tons	Production short tons	Sold or Used Short tons	Sold or Used Value f. o. b. plant	Stocks end of month short tons
1953					
March	10,502	104,460	99,705	38,867,977	15,257
April	15,257	102,071	99,242	38,818,915	18,086
May	18,086	105,464	102,535	40,034,039	21,015
June	21,015	104,152	107,357	41,978,711	17,810
July	17,810	109,285	109,247	43,039,447	17,848
August	17,848	110,545	104,015	41,156,603	24,378
September	24,378	109,333	106,720	42,916,029	26,991
October	26,991	108,219	113,420	45,733,162	21,790
November	21,790	105,636	97,374	39,304,264	30,052
December	30,052	110,291	101,024	40,681,905	39,317
1954					
January	39,319	116,247	112,831	45,540,192	42,735
February	42,735	110,483	94,724	38,110,318	58,494
March	58,494	122,339	117,587	47,220,513	63,246

Aluminum Wrought Products

PRODUCERS' MONTHLY NET SHIPMENTS

(Bureau of Census — Thousands of Pounds)

	Total	Plate, Sheet, & Strip	Rolled Structural Shapes, Rod, Bar & Wire	Extruded Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1948 Total	1,640,206	1,268,297	182,991	171,964	16,954
1949 Total	1,158,146	790,025	203,650	149,995	14,476
1950 Total	1,713,449	1,163,135	269,780	258,075	22,459
1951 Total	1,756,244	1,073,367	345,163	312,944	24,770
1952 Total	1,924,750	1,085,699	443,546	347,542	47,963
1953					
January	188,445	110,725	35,695	37,916	4,109
February	186,155	109,154	36,492	36,579	3,930
March	214,871	127,083	42,062	41,366	4,360
April	220,025	129,172	46,490	40,697	3,666
May	209,667	123,616	41,725	40,628	3,698
June	205,585	121,219	40,258	41,224	2,884
July	202,796	123,429	37,453	39,273	2,641
August	191,007	117,826	32,180	37,623	3,378
September	184,143	111,807	33,295	35,597	3,444
October	186,056	113,589	29,168	38,720	4,579
November	148,894	89,383	24,041	31,590	3,880
December	149,221	91,162	23,187	30,709	4,163
Total	2,286,865	1,368,165	422,046	451,922	44,732
1954					
January	153,920	84,293	31,600	34,576	3,451
February	145,335	80,505	29,577	31,583	3,664
March	170,010	92,955	32,698	38,928	5,429
April	174,176	96,893	33,637	39,246	4,420
May	168,578	94,886	21,197	40,981	3,514

Aluminum Castings Shipments

(Bureau of Census)

BY TYPE OF CASTING

(Thousands of Pounds)

	Total	Sand	Permanent Mold	Die	All Other
1949 Total	351,778	122,604	123,523	93,340	7,311
1950 Total	543,082	184,782	181,366	167,201	9,733
1951 Total	515,131	193,378	160,011	151,465	10,277
1952 Total	518,979	194,616	146,883	169,732	7,748
1953					
January	55,921	19,516	16,211	19,985	209
February	54,988	17,859	16,752	20,129	248
March	59,208	19,047	17,912	21,935	314
April	61,461	20,158	16,628	22,305	370
May	57,340	19,639	16,528	20,858	315
June	56,492	19,349	15,528	21,335	280
July	51,196	16,614	15,692	18,549	341
August	50,428	15,940	16,252	17,837	399
September	53,306	17,826	17,189	17,857	416
October	55,097	17,171	17,030	20,547	349
November	51,014	16,169	15,396	19,012	437
December	51,579	15,265	16,907	18,963	436
Total	658,022	214,553	200,025	239,330	4,114
1954					
January	51,446	14,698	16,615	19,709	424
February	51,213	14,696	17,281	18,754	482
March	56,184	14,468	19,576	21,645	495
April	53,006	14,073	18,091	20,366	476

*Computed on new basis as of October, 1952.

Virgin Aluminum

Virgin 99% Delivered

Monthly Average Prices

(Cents per pound)

	1951	1952	1953	1954
Jan.	19.00	19.00	20.173	21.50
Feb.	19.00	19.00	20.50	21.50
Mar.	19.00	19.00	20.50	21.50
Apr.	19.00	19.00	20.50	21.50
May	19.00	19.00	20.50	21.50
June	19.00	19.00	20.50	21.50
July	19.00	19.00	20.962	....
Aug.	19.00	19.846	21.50	....
Sept.	19.00	20.00	21.50	....
Oct.	19.00	20.00	21.50	....
Nov.	19.00	20.00	21.50	....
Dec.	19.00	20.00	21.50	....
Av.	19.00	19.404	20.928	....

Magnesium Wrought Products Shipments

(Bureau of Census)

(Thousands of Pounds)

	1951	1952	1953	1954
Jan.	1,522	1,635	1,313	972
Feb.	1,489	1,748	1,454	1,058
Mar.	1,889	1,712	1,601	1,136
Apr.	1,531	1,745	1,708	892
May	1,716	1,804	1,699	....
June	1,643	1,428	1,192	....
July	1,391	1,390	1,589	....
Aug.	1,497	1,438	1,433	....
Sept.	1,461	1,305	1,254	....
Oct.	1,773	1,408	1,409	....
Nov.	1,645	1,178	1,314	....
Dec.	1,533	1,440	919	....
Total	19,090	18,249	16,885	....
Total	12,810	19,090	18,249	16,885

Cadmium Averages

N. Y. Monthly Averages

Cents per lb. in ton lots

	1951	1952	1953	1954
Jan.	255.00	255.00	193.00	200.00
Feb.	255.00	255.00	200.00	170.00
Mar.	255.00	255.00	200.00	170.00
Apr.	255.00	255.00	200.00	170.00
May	255.00	237.00	200.00	170.00
June	255.00	225.00	200.00	170.00
July	255.00	225.00	200.00	.....
Aug.	255.00	200.00	200.00	.....
Sept.	255.00	200.00	200.00	.....
Oct.	255.00	200.00	200.00	.....
Nov.	255.00	200.00	200.00	.....
Dec.	255.00	179.81	200.00	.....
Av.	255.00	223.90	199.44	.....

Steel Ingot Production

(American Iron and Steel Institute)

Estimated Production — All Companies

Period	OPEN HEARTH Net tons	OPEN HEARTH Per cent of capacity	BESSEMER Net tons	BESSEMER Per cent of capacity	ELECTRIC Net tons	ELECTRIC Per cent of capacity	TOTAL Net tons	TOTAL Per cent of capacity	Calculated weekly production, all companies (net tons)
1949 Total	70,227,775	82.8	3,946,656	76.0	3,693,922	60.4	77,868,353	81.0	1,492,448
1950 Total	86,262,509	98.7	4,534,558	81.3	6,039,008	86.5	96,836,075	96.9	1,857,232
1951 Total	93,146,625	102.3	4,890,946	87.0	7,096,982	93.9	105,134,553	100.9	2,016,390
1952 Total	82,846,439	87.2	3,523,677	65.5	6,797,923	82.6	93,168,039	85.8	1,782,097
1953									
February	7,939,299	100.8	329,389	92.6	664,091	84.6	8,932,779	99.1	2,233,195
March	9,050,773	103.7	354,710	90.0	762,615	87.7	10,168,098	101.8	2,295,282
April	8,493,909	100.5	334,605	87.7	717,024	85.2	9,545,538	98.7	2,225,067
May	8,925,163	102.3	354,577	90.0	717,340	82.5	9,997,080	100.1	2,256,677
June	8,394,502	99.4	332,060	87.0	677,917	80.5	9,404,479	97.2	2,192,186
July	8,316,342	95.5	324,068	82.4	635,263	73.2	9,275,673	93.1	2,098,569
August	8,463,155	97.0	310,074	78.7	632,351	72.7	9,405,580	94.2	2,123,156
September	8,076,277	95.8	287,638	75.6	519,513	61.9	8,883,428	92.1	2,075,567
October	8,648,428	99.1	325,250	82.6	489,044	56.3	9,462,722	94.7	2,136,055
November	8,002,349	94.7	283,321	74.3	404,382	48.0	8,690,052	89.9	2,025,653
December	7,321,947	84.1	269,813	68.6	354,568	40.9	7,946,328	79.7	1,797,812
Total	100,473,823	97.9	3,855,705	83.2	7,280,191	71.1	111,609,719	94.9	2,140,578
1954									
January	7,256,526	78.3	260,453	64.0	434,507	48.9	7,951,486	75.3	1,794,918
February	6,523,213	77.9	174,523	47.4	385,771	48.1	7,083,237	74.3	1,770,809
March	6,649,667	71.7	207,726	51.1	432,207	48.3	7,289,600	69.0	1,645,508
April	6,365,326	70.9	162,657	41.3	442,954	51.5	6,910,937	68.0	1,624,927
April	6,365,326	70.9	162,657	41.3	442,954	51.5	6,970,937	68.0	1,624,927
May	6,817,951	73.6	198,063	48.7	456,724	51.4	7,472,738	70.7	1,686,848
June	6,697,000	74.6	208,000	52.8	456,000	53.0	7,361,000	72.0	1,716,000

Blast Furnace Output

American Iron and Steel Institute)

net tons

	Pig Iron	Ferro-manganese & Spiegel	Total	% Capacity
1945				
Ttl. Yr.	53,454,872	712,210	54,167,082	80.5
1946				
Ttl. Yr.	44,854,801	523,729	45,378,530	67.4
1947				
Ttl. Yr.	58,507,169	702,561	59,209,730	90.1
1948				
Ttl. Yr.	60,135,941	712,899	60,848,840	90.2
1949				
Ttl. Yr.	53,613,779	592,564	54,206,343	76.8
1950				
Ttl. Yr.	64,810,272	673,896	65,484,168	91.5
1951				
Ttl. Yr.	70,487,380	745,381	71,232,761	98.3
1952				
Feb.	5,722,673	61,921	5,784,602	99.0
Mar.	6,241,286	58,720	6,300,006	100.8
Apr.	5,185,396	39,458	5,224,854	86.3
May	5,436,144	55,564	5,491,708	87.8
June	1,056,278	12,003	1,068,281	17.6
July	995,957	6,537	1,002,512	16.1
Aug.	5,782,096	48,661	5,830,757	93.3
Sept.	6,095,865	68,500	6,164,365	102.1
Oct.	6,442,024	73,067	6,515,091	104.2
Nov.	6,155,565	71,723	6,227,288	102.9
Dec.	6,436,136	73,400	6,509,536	104.4
Total	61,528,665	629,926	62,158,591	84.2
1953				
Jan.	6,482,081	82,302	6,564,393	97.3
Feb.	5,813,202	68,316	5,881,518	96.5
Mar.	6,611,040	66,321	6,677,361	99.0
Apr.	6,171,939	58,702	6,230,641	95.4
May	6,519,082	68,033	6,587,115	97.7
June	6,297,559	74,972	6,372,531	97.6
July	6,436,345	80,142	6,516,487	96.8
Aug.	6,391,749	79,805	6,471,554	96.0
Sept.	6,132,330	69,689	6,202,019	95.2
Oct.	6,419,752	77,958	6,497,710	96.3
Nov.	5,999,704	62,896	6,062,600	92.8
Dec.	5,712,938	65,902	5,778,840	85.9
Total	74,987,721	855,038	75,842,759	95.5
1954				
Jan.	5,516,689	63,824	5,579,513	80.1
Feb.	4,764,613	45,941	4,810,554	76.5
Mar.	4,907,147	52,156	4,959,303	71.2
Apr.	4,449,289	53,277	4,502,566	66.7
May	4,572,252	52,187	4,624,439	66.4

Steel Castings Shipments

(Bureau of Census)

(Short Tons)

	Total	For Sale	For Own Use
1948	1,760,032	1,335,295	424,737
1949	1,250,460	865,297	385,163
1950	1,461,667	929,192	374,217
1951	2,101,604	1,507,413	594,191
1952			
Feb.	174,035	133,205	40,830
Mar.	173,694	131,997	41,697
Apr.	175,075	134,325	40,750
May	173,635	132,129	41,506
June	141,628	114,410	27,218
July	119,036	97,633	21,403
Aug.	150,232	113,997	36,235
Sept.	158,392	121,402	36,990
Oct.	165,155	124,629	40,529
Nov.	148,259	110,467	37,792
Dec.	162,237	122,670	39,567
Total	1,925,116	1,476,352	448,767
1953			
Jan.	167,211	126,819	40,392
Feb.	175,675	137,592	38,083
Mar.	182,181	141,873	40,308
Apr.	179,615	140,051	39,564
May	165,649	126,380	39,269
June	164,665	125,984	38,681
July	139,577	105,687	33,890
Aug.	141,340	107,941	33,399
Sept.	135,303	102,880	32,423
Oct.	140,702	106,788	33,914
Nov.	114,088	84,945	29,143
Dec.	123,281	91,017	32,264
Total	1,829,277	1,290,016	431,330
1954			
Jan.	122,758	93,577	29,181
Feb.	116,520	88,699	27,821
Mar.	122,310	92,271	30,039
Apr	105,788	78,745	27,034

GALVANIZED SHEET SHIPMENTS

(American Iron & Steel Institute)

(Net Tons)

	1951	1952	1953	1954
Jan.	180,399	165,196	201,472	169,086
Feb.	146,200	152,761	183,503	167,433
Mar.	172,535	177,674	204,995	180,029
Apr.	174,129	170,583	196,656	201,671
May	177,310	182,978	189,765	.....
June	176,498	53,947	184,862	.....
July	161,428	56,254	185,896	.....
Aug.	190,578	177,661	187,741	.....
Sept.	157,170	201,318	194,257	.....
Oct.	160,552	219,883	208,705	.....
Nov.	143,044	194,712	177,391	.....
Dec.	145,971	208,191	175,375	.....
Total	1,984,961	1,961,158	2,290,868	.....

SHIPMENTS of TIN-TERNE PLATE

(American Iron & Steel Institute)

(Net Tons)

	Hot Dipped 1953	Hot Dipped 1954	Electrolytic 1953	Electrolytic 1954
Jan.	121,634	93,776	311,635	317,587
Feb.	105,608	95,386	267,824	297,169
Mar.	130,111	120,471	318,049	354,233
Apr.	122,291	145,783	319,386	461,026
May	122,710	.....	336,209	.....
June	127,570	.....	313,595	.....
July	102,291	.....	302,235	.....
Aug.	118,884	.....	271,490	.....
Sept.	95,060	.....	244,718	.....
Oct.	98,889	.....	262,548	.....
Nov.	84,242	.....	218,694	.....
Dec.	88,790	.....	177,075	.....
Total	1,318,080	.....	3,343,458	.....

Steel Ingot Operations

(Percentage of Capacity as Reported by (American Iron & Steel Institute)

Week Beginning	1951	1952	1953	1954
Jan. 4	99.1	102.1	98.2	75.4
Jan. 11	99.6	98.7	99.3	74.3
Jan. 18	100.9	99.4	99.7	74.1
Jan. 25	101.3	100.1	99.4	75.6
Feb. 1	96.7	100.6	97.7	74.4
Feb. 8	98.5	100.1	99.7	74.4
Feb. 15	99.5	100.6	99.1	74.6
Feb. 22	99.8	100.9	99.4	73.6
Mar. 1	101.0	101.3	100.3	70.7
Mar. 8	100.1	101.8	101.3	69.3
Mar. 15	101.1	102.4	101.5	67.6
Mar. 22	103.5	102.6	103.1	68.1
Mar. 29	102.4	102.1	97.1	69.1
Apr. 5	102.3	62.3	98.9	68.0
Apr. 12	102.9	97.0	98.8	68.0
Apr. 19	103.3	100.4	101.0	68.6
Apr. 26	104.0	52.1	100.3	68.7
May 3	103.7	83.0	100.2	69.4
May 10	103.9	100.3	100.3	70.9
May 17	103.6	101.3	99.8	71.8
May 24	102.7	102.3	100.3	71.2
May 31	103.2	38.7	99.6	70.2
June 7	103.2	12.5	97.9	73.2
June 14	103.2	11.8	96.8	72.3
June 21	102.8	12.3	96.8	72.1
June 28	100.8	13.3	91.8	65.8
July 5	101.5	14.2	92.8	60.0
July 12	101.9	15.1	94.7	65.4
July 19	101.4	15.3	94.4	....
July 26	101.5	42.9	92.6	....
Aug. 2	101.1	89.8	94.0	....
Aug. 9	101.5	93.3	95.2	....
Aug. 16	100.4	97.1	95.9	....
Aug. 23	99.8	98.7	93.4	....
Aug. 30	98.3	98.9	90.5	....
Sept. 6	100.0	100.8	89.2	....
Sept. 13	101.2	102.1	91.4	....
Sept. 20	102.1	104.0	95.1	....
Sept. 27	102.6	105.7	95.3	....
Oct. 4	101.8	106.6	95.2	....
Oct. 11	102.1	105.8	96.3	....
Oct. 18	102.9	106.9	95.0	....
Oct. 25	104.5	107.3	94.6	....
Nov. 1	101.0	105.9	93.0	....
Nov. 8	101.0	106.4	92.3	....
Nov. 15	103.7	106.5	90.7	....
Nov. 22	104.0	106.1	86.8	....
Nov. 29	103.6	105.0	87.5	....
Dec. 6	104.1	106.3	86.7	....
Dec. 13	104.9	107.7	84.3	....
Dec. 20	101.4	102.7	64.1	....
Dec. 27	102.0	107.2	75.7	....